ADMINISTRATIVE REVIEW DRAFT

INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

FOR THE

LINCOLN REGIONAL AIRPORT RUNWAY RECONSTRUCTION

Lincoln, CA

June 2022

Prepared for:

City of Lincoln
600 6th Street
Lincoln, CA 95648

Prepared by:

BaseCamp Environmental, Inc.
802 W. Lodi Avenue
Lodi, CA 95240

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LIST OF ACRONYMS AND ABBREVIATIONS USED IN THIS DOCUMENT

AB	Assembly Bill
ARB	California Air Resources Board
BMP	Best Management Practice
CalEnviroScreen	California Communities Environmental Health Screening Tool
Cal Fire	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CARP	County Aquatic Resources Program
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
Corps	U.S. Army Corps of Engineers
dB	decibel
dBA	decibel, A-weighted
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
GHG	greenhouse gas
IS/MND	Initial Study/Mitigated Negative Declaration
MALSR	Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights
MS4	municipal separate storm sewer system
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
OFA	Object Free Area
PAPI	Precision Approach Path Indicator
PCAPCD	Placer County Air Pollution Control District
PCCP	Placer County Conservation Program
PG&E	Pacific Gas and Electric Company
PM_{10}	particulate matter 10 microns or less in diameter
$PM_{2.5}$	particulate matter 2.5 microns or less in diameter
RCEM	Road Construction Emissions Model
ROG	reactive organic gases
RSA	Runway Safety Area
RWQCB	Regional Water Quality Control Board
SB	Senate Bill

SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
VMT	vehicle miles traveled

MITIGATED NEGATIVE DECLARATION

A. General Project Information

Project Title:	Lincoln Regional Airport Runway Reconstruction
Lead Agency Name and Address:	City of Lincoln 600 6th Street Lincoln, CA 95648
Contact Person and Phone Number:	Roland Neufeld, Senior Engineer (916) 434-2481
Project Location:	Lincoln Regional Airport 1480 Flightline Drive, Lincoln, CA
Project Sponsor Name and Address:	City of Lincoln 600 6th Street Lincoln, CA 95648
General Plan Designation:	(I)PD - Industrial Planned Development
Zoning:	Industrial Planned Development
Project Description:	The City proposes to reconstruct Runway 15-33, which extends 6,001 feet, by removing existing asphalt, recompacting the aggregate base, and adding new aggregate base and asphalt. It also proposes to regrade the runway safety areas (RSA) surrounding Runway 15-33, replace two Precision Approach Path Indicators (PAPIs) and an existing Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR), and removing a small rise adjacent to the runway. Two existing service roads that cross the RSA would be removed and realigned. The project would require only site plan approval by the City, as the project would be consistent with the current zoning for the airport.
Surrounding Land Uses and Setting:	The project is within the boundaries of Lincoln Regional Airport in northwest Lincoln. The airport terminal and other buildings associated with airport operations are east of the project site. Abandoned structures that were formerly the

	terminal for the airport, and prior to that the Lincoln Auxiliary Field of the Army Air Forces, are to the southwest.
Other Public Agencies Whose Approval is Required:	State Water Resources Control Board (Construction General Permit), Federal Aviation Administration (airport regulatory authority)
Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, has consultation begun?	No tribes have commented on this project.

B. Environmental Factors Potentially Affected

The environmental factors checked below may be significantly affected by this project, involving at least one impact that is a "Potentially Significant Impact" prior to mitigation. Mitigation measures that would avoid potential effects or reduce them to a level that would be less than significant have been prescribed for each of these effects, as described in the checklist and narrative on the following pages, and in the Summary Table at the end of Chapter 1.0.

	Aesthetics		Agriculture/Forestry Resources		Air Quality
✓	Biological Resources	✓	Cultural Resources		Energy
✓	Geology/Soils		Greenhouse Gas Emissions		Hazards/Hazardous Materials
	Hydrology/Water Quality		Land Use		Mineral Resources
✓	Noise		Population/Housing		Public Services
	Recreation		Transportation	✓	Tribal Cultural Resources
	Utilities/Service Systems		Wildfire	✓	Mandatory Findings of Significance

C. Lead Agency Determination

On the basis of this initial evaluation:

□ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

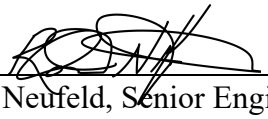
✓ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project and/or mitigation measures that would reduce potential effects to a less than significant level have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

□ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

□ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

□ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

CITY OF LINCOLN



Roland Neufeld, Senior Engineer

6/1/2022

Date

1.0 INTRODUCTION

1.1 Project Brief

This document is an Initial Study/Mitigated Negative Declaration (IS/MND) for the Lincoln Regional Airport Runway Reconstruction Project (project). The project site is located on the Lincoln Regional Airport at 1480 Flightline Drive in northwest Lincoln (Figures 1-1 through 1-5). The IS/MND has been prepared in compliance with the requirements of the California Environmental Quality Act (CEQA). For the purposes of this CEQA analysis, the City of Lincoln (City) is the Lead Agency for the project.

The City proposes to reconstruct Runway 15-33, the Airport's only runway. It also proposes to regrade the runway safety areas (RSA) surrounding Runway 15-33, and it would regrade and reconstruct the segments of existing cross taxiways that would cross the regraded RSA. Two existing service roads that cross the RSA would be removed and realigned. A small topographic rise adjacent to the runway would be removed. The project would require only site plan approval by the City, as the project would be consistent with the current zoning for the airport. The project would also require approval by the Federal Aviation Administration (FAA), for whom a separate environmental review is being conducted.

1.2 Purpose of Initial Study

CEQA requires that public agencies document and consider the potential environmental effects of the agency's actions that meet CEQA's definition of a project. Briefly summarized, a "project" is an action that may cause direct or indirect physical changes in the environment. A project includes the agency's direct activities and activities that involve public agency approvals or funding. The State CEQA Guidelines (California Code of Regulations Title 14, Division 6, Chapter 3) provides guidance for an agency's implementation of CEQA.

Provided that a project is not exempt from CEQA, the first step in the agency's consideration of its potential environmental effects is the preparation of an Initial Study. The purpose of an Initial Study is to determine whether the project would involve "significant" environmental effects, as defined by CEQA, and to describe feasible mitigation measures that would avoid identified significant effects or reduce them to a level that is less than significant. If the Initial Study does not identify significant effects, then the agency ordinarily prepares a Negative Declaration. If the Initial Study concludes that significant effects would occur but also identifies mitigation measures that would reduce these significant effects to a level that is less than significant, then the agency may prepare a Mitigated Negative Declaration. If a project would involve significant effects that cannot be feasibly mitigated, then the agency must prepare an Environmental Impact Report (EIR). The agency may also decide to proceed directly with the preparation of an EIR without first preparing an Initial Study.

The proposed project is a "project" as defined by CEQA and is not exempt from CEQA consideration. The City has determined that the project may have potentially significant environmental effects and therefore requires preparation of an Initial Study. This Initial Study describes the proposed project and its environmental setting, discusses the potential environmental effects of the project, and identifies feasible mitigation measures that would eliminate any potentially significant environmental effects of the project or reduce them to a level that would be less than significant. The Initial Study considers the project's potential for significant environmental effects in the following subject areas:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation/Traffic
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire
- Mandatory Findings of Significance (including Cumulative Impacts)

This Initial Study concludes that the project would have potentially significant environmental impacts, but all these impacts would be avoided or reduced to a level that would be less than significant with identified mitigation measures. The project proponent - the City - has accepted the obligation to implement all the mitigation measures; implementation of mitigation measures will be incorporated into project approvals. As a result, the City has prepared a Mitigated Negative Declaration and has issued a Notice of Intent to adopt the IS/MND for the project. The Notice of Intent, inside the cover of this document, shows the time available for public comment on the IS/MND.

1.3 Project Background

Lincoln Regional Airport is owned and operated by the City of Lincoln. It is in northwest Lincoln approximately three miles from the downtown area. The airport is at an elevation of 121.4 feet above sea level and encompasses approximately 775 acres. The airport property is bordered by Nicolaus Road to the south, Airport Road to the west, West Wise Road to the north, and Aviation Boulevard to the east. The airport is accessible via Flightline Drive west of Aviation Boulevard. The Lincoln Regional Airport is a general aviation airport that serves the general aviation fleet in the City of Lincoln, western Placer County, and northwestern Sacramento County. The fleet consists mainly of single-engine and twin-engine aircraft, but business jet activity has increased significantly. The airport has been classified as a reliever airport to relieve congestion at Sacramento International Airport (Brandley 2015).

When originally constructed by the U.S. Army Air Corps during World War II, the airport consisted of four runways - three in a triangular arrangement and a fourth running through the center - each about 4,000 feet long by 300 feet wide. After the war, the airport was released to the City of Lincoln, which operated it for several years from a small hangar and apron area located in the southwest corner of the airport property at Nicolaus Road and Airport Road. By the early 1970s, all runways were closed and abandoned except for the center runway, now designated Runway 15-33. In the early 1980s, the City acquired additional property and Runway 15-33 was extended northward to its present length of 6,001 feet and width of 100 feet.

Currently, along with Runway 15-33, the airport has a full-length parallel taxiway to the east that is connected to Runway 15-33 by five cross taxiways (Figure 1-6). The airport also has an aircraft parking apron approximately 22.1 acres in size with 240 aircraft parking positions, 207 aircraft hangars, a helipad with three parking positions, four Fixed Base Operators (FBOs), aviation fuel dispensers, an aircraft wash rack, and an airport office and pilot's lounge (Brandley Consulting 2020). There are also ten aviation service businesses and offices for the City Department of Public Works, which manages the airport. As of 2018, estimated annual operations at Lincoln Regional Airport were 75,000, with 291 aircraft based at the airport (Brandley Consulting 2020).

Runway 15-33 was originally constructed in 1973 to a length of 3,700 feet. In 1983, the runway was extended 2,301 feet to the north, and the existing 3,700 feet was overlaid with three inches of bituminous surface course. The pavement section for the southerly 3,700-feet of this runway consists of five inches of bituminous surface course over seven inches of aggregate base course. Thermal stresses and seasonal weathering have resulted in significant runway pavement cracking and pavement surface deterioration, despite ongoing runway maintenance programs. Pavement testing indicated that pavement strengths varied along the length of the runway; the result of the tests indicated that the existing aggregate base course under the existing asphalt surface is in good condition, but the cracked asphalt surface requires replacement.

The City adopted the Lincoln Regional Airport Master Plan in 2007 after preparing and certifying an EIR for the plan. The Master Plan describes existing facilities at the airport, estimates future aviation usage, and proposes projects that would accommodate the future usage. Among the projects proposed were the rehabilitation of Runway 15-33 and improvements to lighting guidance systems.

1.4 Environmental Evaluation Checklist Terminology

The project's potential environmental effects are evaluated in the Environmental Evaluation Checklist presented in Chapter 3.0 of this IS/MND. The checklist includes a list of environmental considerations against which the project is evaluated. For each question, the City determines whether the project would involve 1) a Potentially Significant Impact, 2) a Less Than Significant Impact with Mitigation Incorporated, 3) a Less Than Significant Impact, or 4) No Impact.

- A Potentially Significant Impact occurs when there is substantial evidence that

the project would involve a substantial adverse change to the physical environment, i.e., the environmental effect may be significant, and feasible mitigation measures have not been defined that would reduce the impact to a level that would be less than significant. If there is a Potentially Significant Impact entry in the Initial Study, then an EIR is required. No Potentially Significant Impacts have been identified in this IS/MND.

- An environmental effect that is Less Than Significant with Mitigation Incorporated is a Potentially Significant Impact that can be avoided or reduced to a level that is less than significant with the application of defined mitigation measures. This IS/MND identifies a few impacts that are Less than Significant with Mitigation Incorporated.

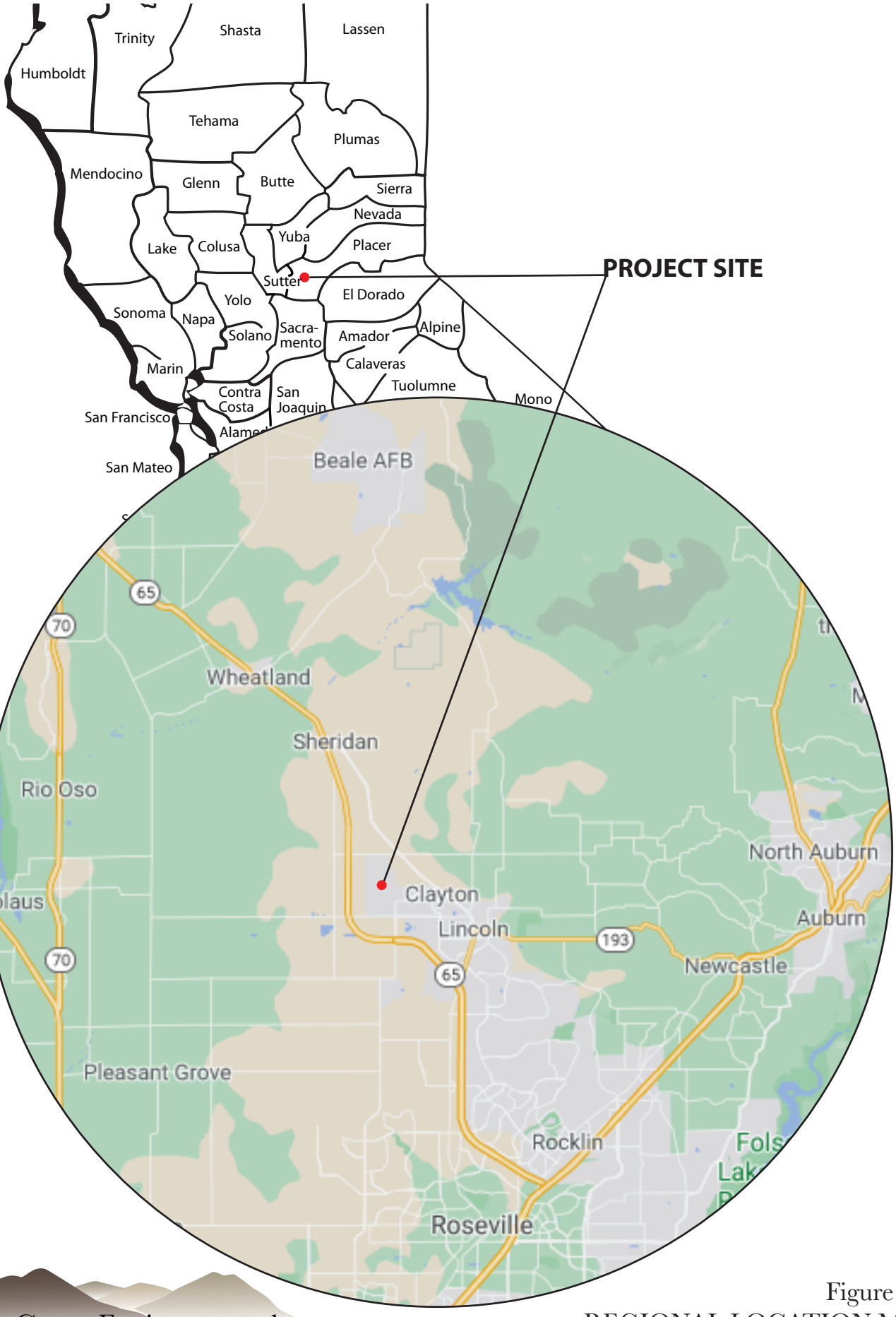
- A Less Than Significant Impact occurs when the project would involve an environmental impact, but the impact would not cause a substantial adverse change to the physical environment such that mitigation would be required.

- A determination of No Impact is self-explanatory.

This IS/MND identifies certain potentially significant environmental effects that would be mitigated by implementation of existing provisions of law and standards of practice related to land use planning and environmental protection. Where appropriate, such provisions are identified and considered in the environmental impact analysis, and the degree to which they would reduce potential environmental effects is discussed. These protections are considered part of the existing regulatory environment and are assumed to avoid or minimize the potential environmental effects of the project. Additional mitigation measures are identified in this IS/MND, as necessary, when existing provisions of law and standards of practice are not adequate to avoid potentially significant environmental effects or to reduce them to a level that is less than significant.

1.5 Summary of Environmental Effects and Mitigation Measures

Table 1-1, which follows Figures 1-1 through 1-5, summarizes the results of the Environmental Evaluation Checklist and associated narrative discussion in Chapter 3.0 of this IS/MND. The potential environmental impacts of the proposed project are listed in the left-most column of this table. The level of significance of each impact is indicated in the second column. Feasible mitigation measures that avoid or minimize the impacts, if necessary, are shown in the third column, and the significance of the impact after the mitigation measures are applied is shown in the fourth column.



BaseCamp Environmental

Figure 1-1
REGIONAL LOCATION MAP

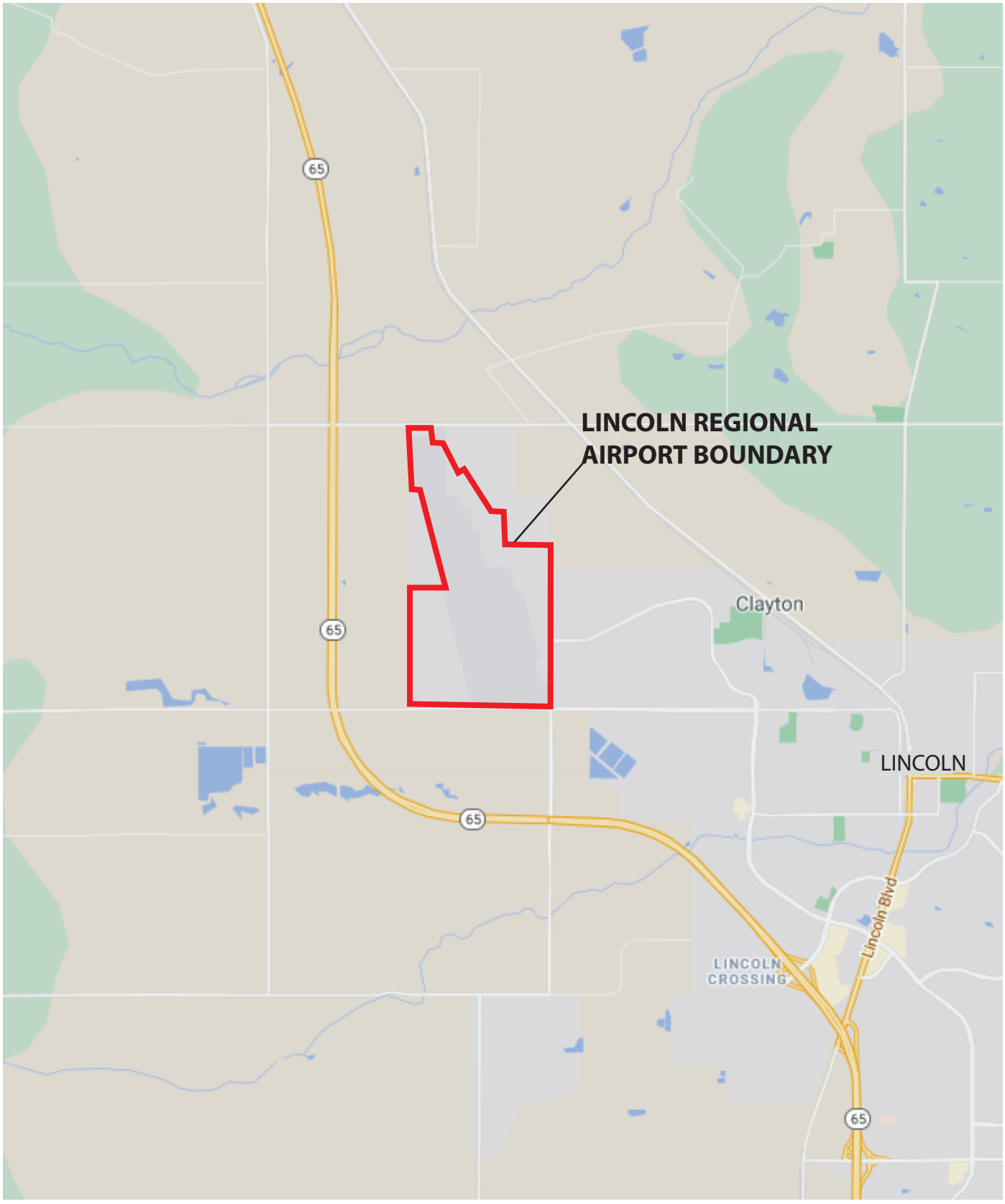


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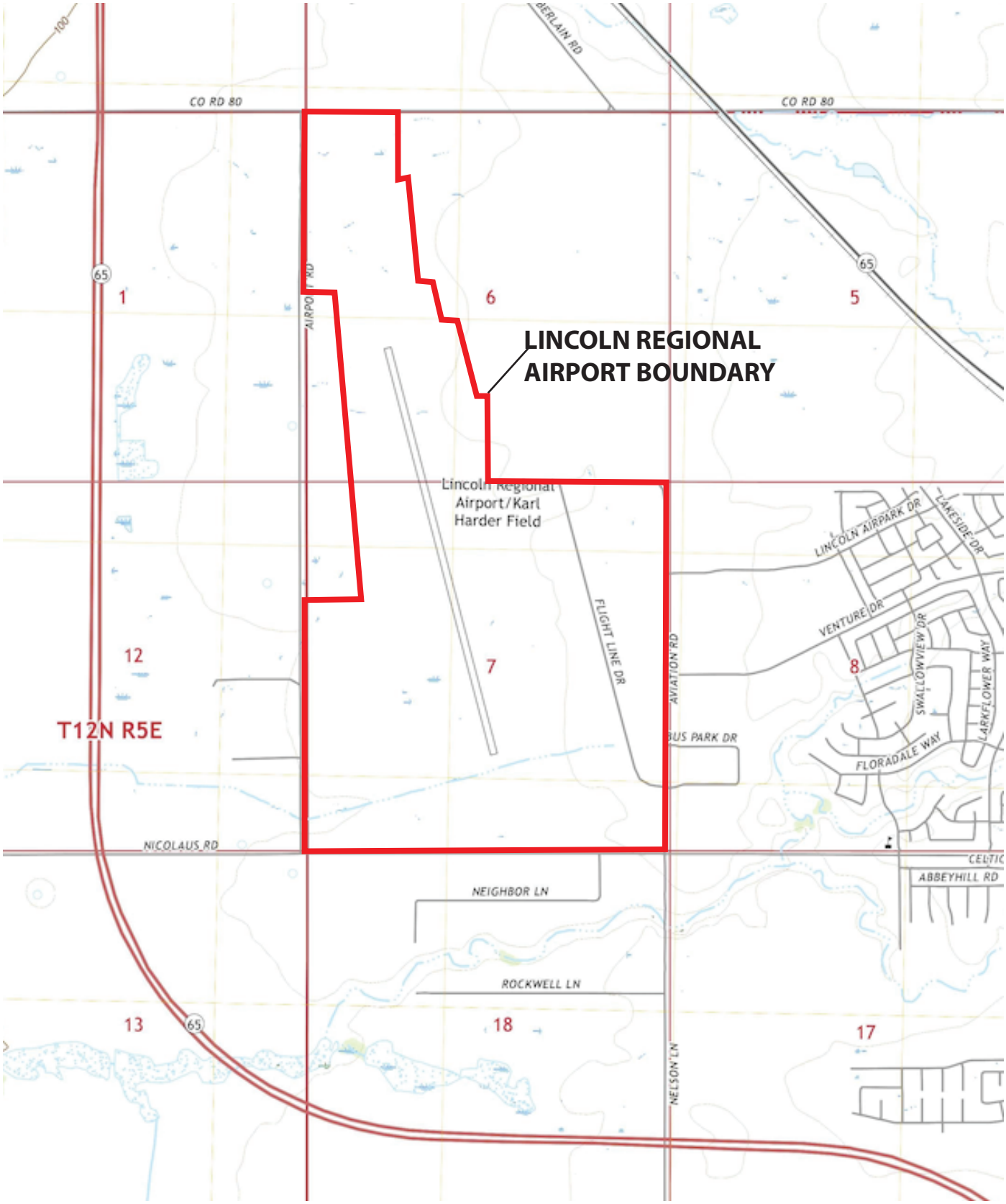
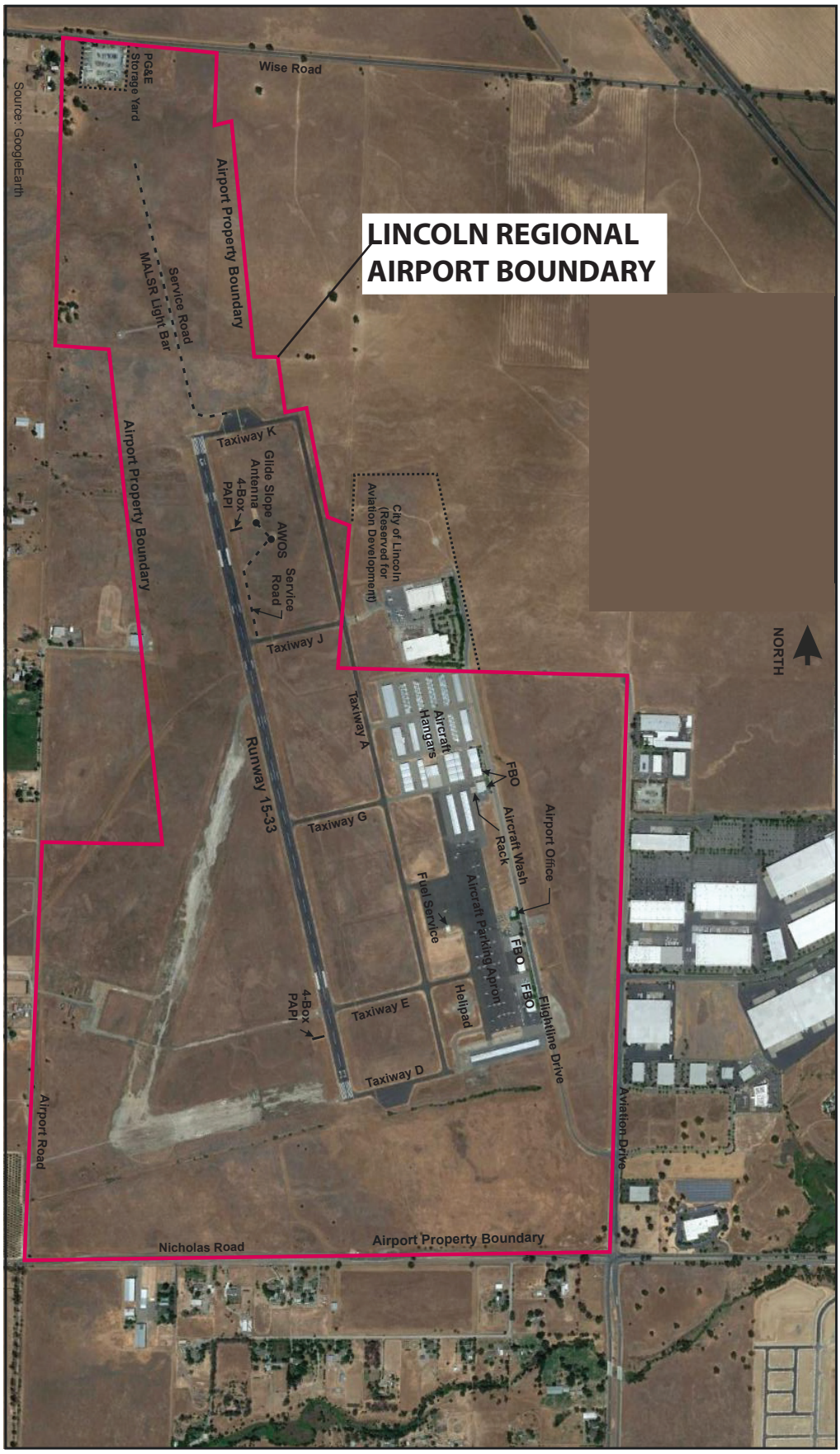
Figure 1-2
STREET MAP



SOURCE: USGS Quadrangle Map, Lincoln CA, 2018. T 2N, R 5E, S 6,7.



SOURCE: Jim Wallace

Figure 1-4
AERIAL PHOTO/EXISTING CONDITIONS

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
3.1 AESTHETICS			
a) Scenic Vistas	NI	None required	-
b) Scenic Resources and Highways	NI	None required	-
c) Visual Character and Quality	NI	None required	-
d) Light and Glare	NI	None required	-
3.2 AGRICULTURE AND FORESTRY RESOURCES			
a) Agricultural Land Conversion	NI	None required	-
b) Conflict with Agricultural Zoning or Williamson Act Contract	NI	None required	-
c, d) Forest Lands	NI	None required	-
e) Indirect Conversion of Farmland or Forest Land	NI	None required	-
3.3 AIR QUALITY			
a) Air Quality Plan Consistency	LS	None required	-
b) Cumulative Emissions	LS	None required	-
d) Exposure of Sensitive Receptors	NI	None required	-
e) Odors and Other Emissions	LS	None required	-
3.4 BIOLOGICAL RESOURCES			
a) Special-Status Species	PS	BIO-1: Prior to the start of construction activities, a preconstruction survey for western spadefoot toad shall be conducted by a qualified biologist. If the species are identified as occurring on the airport, to compensate for the permanent loss of habitat, the City shall set aside and	LS

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
		preserve areas within the airport to construct and manage new toad habitat. It is likely that toad habitat will correspond closely with fairy shrimp habitat; therefore, habitat creation and maintenance for the western spadefoot toad could be combined with that for fairy shrimp that is required under the provisions of the Placer County Conservation Program. However, if this is not feasible, then the City shall create and maintain additional toad habitat on the airport to replace the loss of habitat.	
b) Riparian and Sensitive Habitats,	NI	None required	-
c) State and Federally Protected Wetlands	LS	None required	-
d) Fish and Wildlife Movement	NI	None required	-
e) Local Biological Resource Requirements	NI	None required	-
f) Conflict with Habitat Conservation Plans	NI	None required	-
3.5 CULTURAL RESOURCES			
a) Historical Resources	NI	None required	-
b) Archaeological Resources	PS	CULT-1: If any subsurface archaeological resources are encountered during project construction, the City shall be immediately notified and all construction activities within a 30-foot radius of the encounter shall be immediately halted until a qualified archaeologist can examine these materials, evaluate their significance and, if potentially significant, recommend measures on the disposition or conservation of the resource. Recommended measures could include, but are not limited to, 1) preservation in place, or 2) excavation, recovery, and curation by qualified professionals. The City or its contractor shall be responsible for retaining qualified professionals, implementing recommended mitigation measures, and	LS

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
		documenting mitigation efforts in written reports to the City.	
c) Human Burials	LS	None required	-
3.6 ENERGY			
a) Project Energy Consumption	LS	None required	-
b) Consistency with Energy Plans	NI	None required	-
3.7 GEOLOGY AND SOILS			
a-i) Fault Rupture Hazards	NI	None required	-
a-ii, iii) Seismic Ground Shaking and Seismic-Related Ground Failure	LS	None required	-
a-iv) Landslides	NI	None required	-
b) Soil Erosion	LS	None required	-
c) Geologic Instability	LS	None required	-
d) Expansive Soils	LS	None required	-
e) Adequacy of Soils for Sewage Disposal	NI	None required	-
f) Paleontological Resources	PS	GEO-1: If any subsurface paleontological resources are encountered during project construction, the City shall be immediately notified and all construction activities within a 30-foot radius of the encounter shall be immediately halted until a qualified paleontologist can examine these materials, evaluate their significance and, if potentially significant, recommend measures on the disposition or conservation of the resource. Recommended measures	LS

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
		could include, but are not limited to, 1) preservation in place, or 2) excavation, recovery, and curation by qualified professionals. The City or its contractor shall be responsible for retaining qualified professionals, implementing recommended mitigation measures, and documenting mitigation efforts in written reports to the City.	
3.8 GREENHOUSE GAS EMISSIONS			
a, b) Project GHG Emissions and Consistency with GHG Reduction Plans	LS	None required	-
3.9 HAZARDS AND HAZARDOUS MATERIALS			
a) Hazardous Material Transportation, Use, and Storage	NI	None required	-
b) Upset and Accident Conditions	LS	None required	-
c) Release of Hazardous Materials near Schools	NI	None required	-
d) Hazardous Material Sites	NI	None required	-
e) Public Airports	NI	None required	-
f) Emergency Response and Evacuations	NI	None required	-
g) Wildland Fire Hazards	NI	None required	-
3.10 HYDROLOGY AND WATER QUALITY			
a) Water Quality	LS	None required	-
b) Groundwater Supplies and Recharge	NI	None required	-
c-i, ii, iii) Drainage Patterns and Runoff	NI	None required	-

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
c-iv) Flooding Hazards	NI	None required	-
d) Release of Pollutants in Flood, Tsunami, or Seiche Zones	NI	None required	-
e) Conflicts with Water Quality or Groundwater Management Plans	LS	None required	-
3.11 LAND USE AND PLANNING			
a) Division of Established Community	NI	None required	-
b) Conflicts with Land Use Plans, Policies and Regulations	LS	None required	-
3.12 MINERAL RESOURCES			
a, b) Availability of Mineral Resources	NI	None required	-
3.13 NOISE			
a) Generation of Noise Exceeding Local Standards	PS	NOISE-1: In accordance with the Lincoln Regional Airport Master Plan EIR, certified in 2008, the following noise mitigation measures shall be implemented: • Construction activities shall be prohibited between the hours of 6 p.m. Saturday and 6:30 a.m. Monday, 8 p.m. and 6:30 a.m. Monday through Thursday, 8 p.m. Friday and 9 a.m. Saturday, or anytime on City-observed holidays, unless the City Director of Public Works approves changes to these hours. • The construction contractor shall employ noise-reducing construction practices such that City noise ordinance standards are not exceeded, as approved by the City Director of Public Works. Measures to be used to limit noise may include, but are not limited to:	LS

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
		▪ Locating equipment as far as practical from noise-sensitive uses; ▪ Not using equipment that is louder than standard equipment; ▪ Selecting haul routes that affect the fewest number of people; ▪ Using noise-reducing enclosures around noise-generating equipment; and ▪ Constructing barriers between noise sources and noise-sensitive land uses to block sound transmission.	
b) Exposure to Groundborne Vibrations	NI	None required	-
c) Public Airport and Private Airstrip Noise	NI	None required	-
3.14 POPULATION AND HOUSING			
a) Unplanned Population Growth	NI	None required	-
b) Displacement of Housing or People	NI	None required	-
3.15 PUBLIC SERVICES			
a-i) Fire Protection	NI	None required	-
a-ii) Police Protection	NI	None required	-
a-iii) Schools	NI	None required	-
a-iv) Parks	NI	None required	-
a-v) Other Public Facilities	NI	None required	-

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
3.16 RECREATION			
a, b) Recreational Facilities	NI	None required	-
3.17 TRANSPORTATION			
a) Conflicts with Transportation Programs/Plans	LS	None required	-
b) Conflict with CEQA Guidelines Section 15064.3(b)	NI	None required	-
c) Traffic Hazards	NI	None required	-
d) Emergency Access	NI	None required	-
3.18 TRIBAL CULTURAL RESOURCES			
a, b) Tribal Cultural Resources	PS	TCR-1: If any possible tribal cultural resources are discovered during ground disturbing construction activities, all work shall cease within 100 feet of the find. A Tribal Representative from a California Native American tribe that is traditionally and culturally affiliated with a geographic area shall be immediately notified and shall determine if the find is a tribal cultural resource. The Tribal Representative will make recommendations for further evaluation and treatment as necessary. Preservation in place is the preferred alternative; however, other culturally appropriate treatment may be implemented. Culturally appropriate treatment may be, but is not limited to, processing materials for reburial, minimizing handling of cultural objects, leaving objects in place within the landscape, returning objects to a location within the project area where they will not be subject to future impacts. Materials shall not be permanently curated unless approved by the Tribal Representative. The contractor shall implement any measures deemed by the City to be necessary and feasible to preserve in place,	LS

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
		avoid, or minimize impacts to the resource, including, but not limited to, facilitating the appropriate tribal treatment of the find, as necessary. Treatment that preserves or restores the cultural character and integrity of a tribal cultural resource may include tribal monitoring, culturally appropriate recovery of cultural objects, and reburial of cultural objects or cultural soil. Work at the discovery location cannot resume until all necessary investigation and evaluation of the discovery under the requirements of CEQA, including AB 52, have been satisfied.	
3.19 UTILITIES AND SERVICE SYSTEMS			
a) Relocation or Construction of Utility Facilities	NI	None required	-
b) Water Supplies	NI	None required	-
c) Wastewater Treatment Capacity	NI	None required	-
d, e) Solid Waste Services	NI	None required	-
3.20 WILDFIRE			
a) Emergency Response Plans and Emergency Evacuation Plans	NI	None required	-
b) Exposure of Project Occupants to Wildfire Hazards	NI	None required	-
c) Installation and Maintenance of Infrastructure	NI	None required	-
d) Risks from Runoff, Post-Fire Slope Instability, or Drainage Changes	NI	None required	-
3.21 MANDATORY FINDINGS OF SIGNIFICANCE			
a) Findings on Biological and Cultural Resources	PS	Mitigation measures in Sections 3.4, 3.5, and 3.18 above.	LS

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
b) Findings on Cumulatively Considerable Impacts	LS	None required	-
c) Findings on Adverse Effects on Human Beings	LS	None required	-

Notes: NI = No Impact; LS = Less Than Significant; PS = Potentially Significant

2.0 PROJECT DESCRIPTION

2.1 Project Location

The project site is located within Lincoln Regional Airport at 1480 Flightline Drive in northwest Lincoln (see Figures 1-1 through 1-5). The project site is shown on the U.S. Geological Survey's Lincoln 7.5-minute quadrangle map within Section 7, Township 12 North, Range 6 East, Mt. Diablo Base and Meridian. The latitude of the project site is approximately 38° 54′ 35″ North, and the longitude is approximately 121° 21′ 05″ West.

2.2 Project Details

The objectives of the proposed project are to provide a long-term, cost-effective solution for the reconstruction of Runway 15-33, the airport's only runway, which is deteriorating and could fail; to regrade the RSA; to remove a topographic penetration into Part 77 airspace; and to realign service roads. This project is necessary for the airport to be consistent with Federal Aviation Administration (FAA) design standards as designated in FAA Advisory Circular 150/5300-13A, *Airport Design*, dated February 26, 2014. A detailed description of the project is provided below.

Runway Reconstruction

The proposed project would reconstruct Runway 15-33 (Figure 2-1). Reconstruction would include removal of the existing asphalt, which would be recycled for later project use, and re-compaction of the existing base course. Six inches of new aggregate base course and four inches of a new asphalt surface course would be added. This would increase the runway surface elevation by a maximum of eight inches. The runway would be re-marked after reconstruction is completed. A Notice to Air Missions that Runway 15-33 would be closed during the 45- to 60-day construction period would be issued prior to start of reconstruction. The shoulders along Runway 15-33 would be reconstructed to match the grade of the new runway elevation. The runway material that is removed would be temporarily stockpiled in designated locations; this material could be used as fill for the raised runway shoulders, which would provide a stable surface to prevent erosion and vegetation growth.

RSA Regrade

The Runway Safety Area (RSA) would be regraded to meet FAA design standards. The RSAis defined as surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway. Currently, the RSA surrounding Runway 15-33 is 100 feet on each side of the runway lengthwise and extends 600 feet beyond the ends of the runway (Figure 2-2). The RSA would be regraded and re-sloped, with fill material made available from a topographical feature removal (see below) and runway excavation. The regrading would

eliminate existing uneven terrain in the portions of the RSA beyond the runway ends. When the RSA is reconstructed, its toe would extend about 12 to 15 feet beyond its existing location.

The cross taxiways connecting to Runway 15-33 would be regraded to match the new runway and RSA grade. Regrading would be limited to the portion of the cross taxiways within the RSA. In addition, the Runway 15-33 lights would be raised to match the new raised runway. New runway lights, transformers, and cable will be installed on the existing light cans with new light can extensions.

Approach Indicators

There are two existing 4-box Precision Approach Path Indicators (PAPIs), one on each side of Runway 15-33, within its defined Object Free Area (OFA) (see Figure 2-2). The OFA is approximately 800 feet in width, 400 feet on each side of the runway as measured from its centerline. A PAPI provides the pilot with a safe and accurate glide slope on final approach to the runway. A 4-box PAPI consists of four light housing assemblies arranged in a row perpendicular to the approach path, which are seen by the pilot in combinations of red and white light to indicate a path that is too high, too low, or correctly on slope.

The existing PAPIs each have a power control unit that is located within the OFA. While the PAPI light units are required to be in the RSA/OFA, the power control units are not, and the existing power control units are a potential obstruction to aircraft. The project proposes to replace the two existing PAPIs with new PAPIs that do not require a power control unit, thereby removing the potential obstruction. The existing PAPIs and their power control units would be removed.

The runway area also has three Medium Intensity Approach Lighting Systems with Runway Alignment Indicator Lights (MALSRs) at the northern end of Runway 15-33. All three features are within the current RSA and OFA. A MALSR is used by pilots during instrument landing approach to align the aircraft with the centerline of the runway. It consists of a combination of steady burning light bars and flashers that provide visual information on runway alignment, height perception, roll guidance, and horizontal references to support the visual portion of an instrument approach. One of the components of a MALSR is a threshold light array consisting of 18 to 33 aviation green steady burning lights, depending on runway width, arranged in a line at and parallel to the threshold of the runway.

The project proposes to remove and replace an existing MALSR 18-light threshold light bar on Runway 15-33. The MALSR would be impacted by the runway surface elevation change; therefore, it would be necessary to remove and replace this MALSR light bar for the new runway elevation in the same location.

Other Project Features

Two existing graveled service roads to Runway 15-33 would be realigned. One road that parallels the runway north of Taxiway J would be removed, and a new service road would be extended from the taxiway paralleling Runway 15-33 to a navigational aid

feature outside the OFA. The other service road currently encroaches into the RSA at the north end of Runway 15-33; this road would be relocated outside the regraded RSA. The abandoned road surfaces would be reclaimed.

The project proposes to excavate and eliminate a topographic feature, a small rise west of the northern end of Runway 15-33. Although of limited height, this feature penetrates Part 77 airspace, which is not permitted by FAA regulations. Material from the excavation would be temporarily stored at the airport and would be used as fill during RSA regrading.

2.3 Permits and Approvals

The project would be consistent with the existing land use designation of the Lincoln General Plan and with existing City zoning. It is also consistent with the proposed improvements in the Lincoln Regional Airport Master Plan. Therefore, the project would require only site plan review and approval from the City of Lincoln.

Other reviews and approvals from State and local agencies would likely include a Construction General Permit from the State Water Resources Control Board (SWRCB). Chapter 3.0 describes these permits in more detail, under the appropriate environmental issue.

The FAA is the principal federal authority for aviation and airport regulation, and it would make the final decision on the project. It has responsibility for environmental review and approval of airport improvement projects under the National Environmental Policy Act (NEPA), a separate process from CEQA. The City is preparing a NEPA Environmental Assessment for FAA approval concurrently with preparation of this IS/MND. The FAA would need to approve the Environmental Assessment prior to its decision on the project.

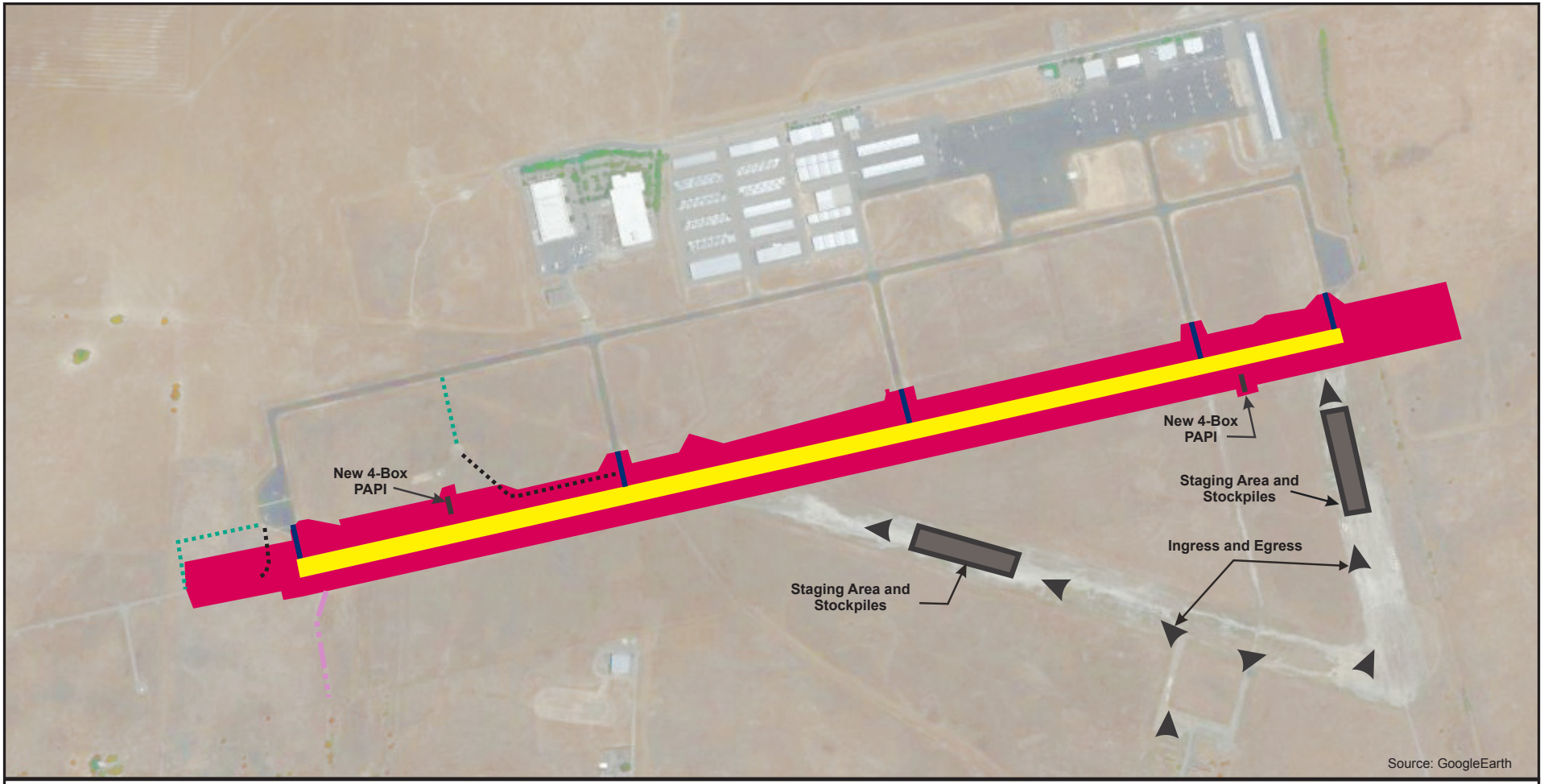


Figure 2-1
PROPOSED PROJECT

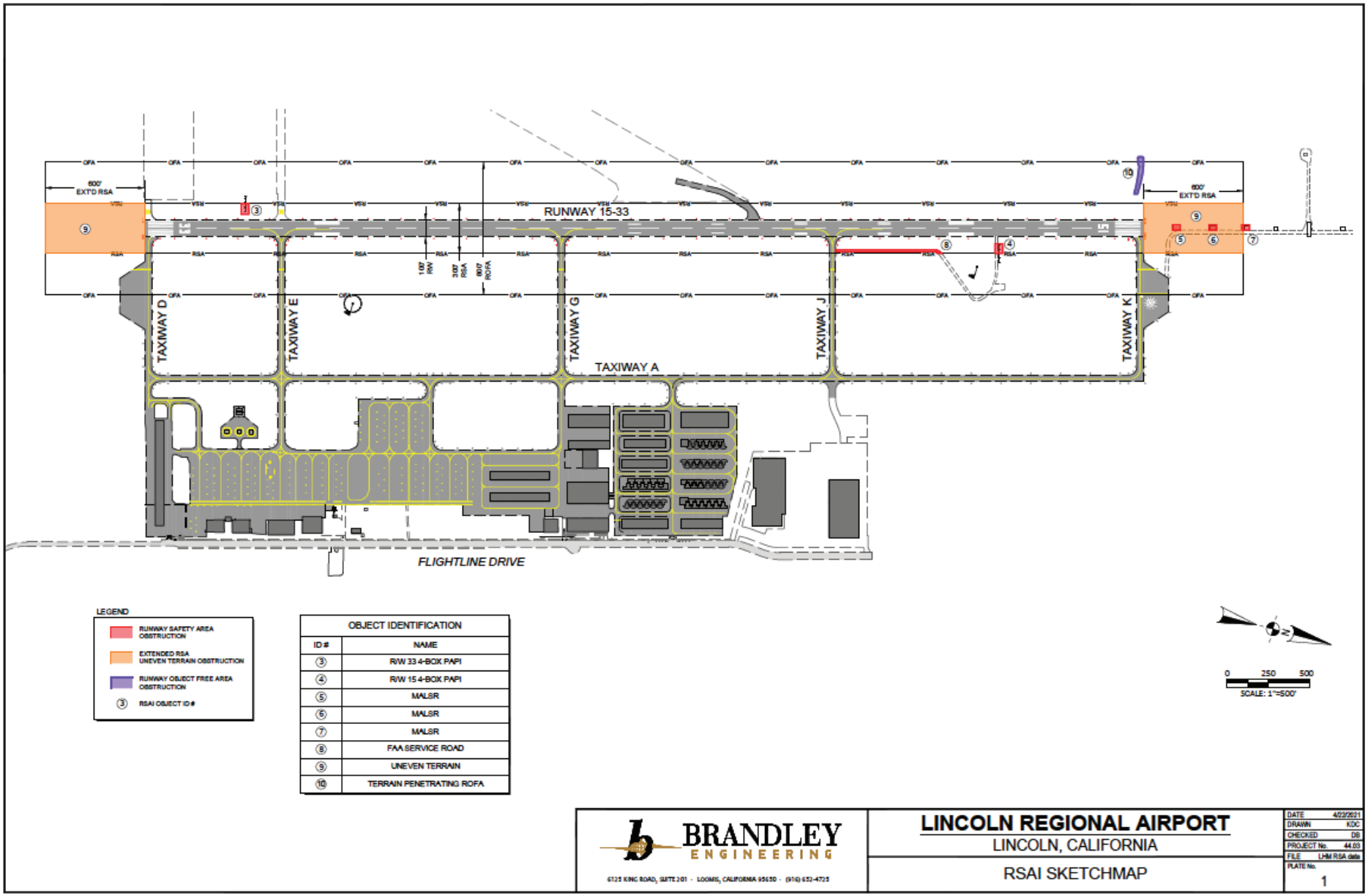


Figure 2-2
RSA AND OFA LOCATIONS

3.0 ENVIRONMENTAL CHECKLIST FORM

3.1 AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?				✓
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				✓
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?				✓
d) Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?				✓

NARRATIVE DISCUSSION

Environmental Setting

Chapter 1.0, Introduction, describes the existing facilities at Lincoln Regional Airport. Airport offices, aircraft hangars and aviation related businesses are all located on the eastern portion of the airport and are served by Flightline Road, west of Aviation Boulevard. The runway area is mostly an open space area clear of structures except for navigational aids. The area west of the runway is mostly open space, except for some deteriorated wooden buildings associated with the former Army Air Corps facilities.

The Lincoln Regional Airport is bounded on the north by Wise Road, on the east by Aviation Boulevard, on the south by Nicolaus Road and on the west by Airport Road. Viewers traveling past the airport on Nicolaus Road have a limited view of airport buildings and none of the runway itself. The airport property is fenced along Nicolaus Road, but most of the southern portion of the airport blends with surrounding rural uses. Virtually none of the airport is visible from Wise Road. Views from Airport Road include a fence and the former Army Air Corps buildings. Aircraft hangars, aviation-related buildings, and other structures are visible west of Aviation Boulevard and Flightline Drive, the latter the primary access to the airport.

California Public Resources Code Section 21099 states that the aesthetic and parking impacts of residential, mixed-use residential, or employment center projects on an infill site within a transit priority area shall not be considered significant. The project is not a residential, mixed-use residential, or employment center project. Therefore, it does not meet the criteria of Section 21099, and aesthetic impacts must be analyzed.

Environmental Impacts and Mitigation Measures

a) Scenic Vistas.

Scenic vistas have been defined as vantage points with a broad and expansive view of a significant landscape feature, such as a mountain range or coastline. The existing built environment in the eastern portion of the airport severely limits distant views of the Sierra Nevada mountains to the east from that vicinity. Views of agriculture and open space areas in all directions are available from other portions of the airport; these are identified as scenic resources (City of Lincoln 2008a).

No permanent changes to the overall use or general appearance of the runway or surrounding area are proposed, other than a slight elevation of the runway and the RSA. This elevation would not intrude upon existing vistas. As such, the project would not affect existing scenic vistas available from the airport. The project would have no impact on scenic vistas.

b) Scenic Resources and Highways.

The project site itself contains no scenic resources of notable value. The project site consists of a runway with navigational aids. No mature trees or other substantial vegetation of scenic value are located in the project area; such resources are not permitted in the runway area because they would be potential safety hazards to aircraft.

According to the Caltrans official list of Designated Scenic Highways under the California Scenic Highway Program, there are no officially designated state scenic highways within Placer County, although there are several highways eligible for such designation, including State Highway 49, State Highway 89, State Highway 28, and a portion of Interstate Highway 80 (Caltrans 2019). The project site is not on or near any road eligible for State Scenic Highway designation. The Lincoln General Plan has not designated any local scenic roadways (City of Lincoln 2008b). The project would have no impact on scenic resources.

c) Visual Character and Quality.

The project site is a part of Lincoln Regional Airport, which has been developed with several buildings and structures related to airport operations. As noted, the project site contains no scenic resources of notable value. The project, which would be the improvement of an existing runway, would be consistent with the existing landscape. In general, the runway, cross taxiways, and runway safety areas cannot be observed from outside of the airport. As noted, no permanent changes to the overall use or general appearance of the runway or surrounding area are proposed, other than a slight elevation of the runway and the RSA. This elevation would not be noticeable from the surrounding public roads. The project would have no impact on visual character or quality.

d) Light and Glare.

The project proposes to upgrade the PAPI and MALSR navigational light systems for Runway 15-33. These new systems would not lead to an increase in indirect illumination of any nearby land uses that would be sensitive to changes in lighting levels. The nearest sensitive land use are the rural residences along the west side of Airport Way to the west, and the nearest such residence is more than 1,500 feet away. Moreover, the new lighting systems would be installed on or close to the ground and would be visible only from the approach/departure lane, so light from these systems would not be readily visible to land uses to the side of the airport runway.

None of the project features would use any materials that produce glare that would be visible to anyone outside the airport. The project would have no impact related to light and glare.

3.2 AGRICULTURE AND FORESTRY RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				✓
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				✓
d) Result in the loss of forest land or conversion of forest land to non-forest use?				✓
e) Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use?				✓

NARRATIVE DISCUSSION

Environmental Setting

The project site, along with the remainder of the Lincoln Regional Airport, is not used for agricultural production and has not been used for such activity since construction of the airport in 1942. The Important Farmland Maps, prepared by the California Department of Conservation as part of the Farmland Mapping and Monitoring Program, designate the

viability of lands for farmland use, based on the physical and chemical properties of the soils. The maps categorize farmland, in decreasing order of soil quality, as "Prime Farmland," "Farmland of Statewide Importance," "Unique Farmland," and "Farmland of Local Importance." The first three categories are defined as “Farmland” by CEQA Guidelines Appendix G. The 2018 Important Farmland Map of Placer County designates the project site as Urban and Built-Up Land.

Environmental Impacts and Mitigation Measures

a) Agricultural Land Conversion.

As noted, the project site is classified as Urban and Built-Up Land, which does not meet the definition of Farmland in CEQA Guidelines Appendix G. The project would not convert Farmland and therefore would have no impact on this issue.

b) Conflict with Agricultural Zoning or Williamson Act Contract.

The project site, along with the remainder of Lincoln Regional Airport, is currently zoned by the City as (I)PD, an Industrial Planned Development zone. It is not zoned for agricultural use. The Williamson Act preserves agricultural land by means of a contract between the landowner and local government that keeps the contracted land in agricultural use in exchange for a lower property tax assessment. None of the Lincoln Regional Airport property is under a Williamson Act contract. The project would have no impact on agricultural zoning or Williamson Act contracts.

c, d) Forest Lands.

The project site is in an airport; there are no forest lands on the project site or in the vicinity. No land in the project vicinity is zoned as forest land or timberland. The project would have no impact on forest lands.

e) Indirect Conversion of Farmland or Forest Land.

While there are rural lands adjacent to Lincoln Regional Airport that are used for agricultural activities, the project is entirely within airport property. The project would not involve changes to the existing environment, such as the extension of infrastructure, outside the airport that could lead to conversion of these lands. The project would have no impact on indirect conversion of agricultural lands. As noted in c, d) above, there are no forest lands in the vicinity, so the project would have no impact on indirect conversion of forest land.

3.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollutant control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable Air Quality Attainment Plan?			✓	
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			✓	
c) Expose sensitive receptors to substantial pollutant concentrations?				✓
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			✓	

NARRATIVE DISCUSSION

Environmental Setting

The project site is within the Sacramento Valley Air Basin, which encompasses all of Sacramento, Yolo, Yuba, Sutter, Colusa, Glenn, Tehama, Shasta, and parts of Solano and Placer Counties. Potential air quality problems near the project site are directly related to climatic factors. During the summer months, the general wind circulation has the potential to transport ozone from the Sacramento metropolitan area. During the winter months, more localized problems can arise when particulate emissions from wood burning have the potential to accumulate under inversion conditions (City of Lincoln 2007a).

Table 3-1 shows the current attainment status of the western Placer County portion of the Air Basin relative to the federal and State ambient air quality standards for criteria pollutants. Except for ozone and particulate matter, western Placer County is in attainment of, or unclassified for, all federal and State ambient air quality standards. However, in 2020, air quality in Placer County was significantly affected by wildfires burning in the county and throughout northern California.

Ozone is not emitted directly into the air but is formed when reactive organic gases (ROG) and nitrogen oxides (NO_x) react in the atmosphere in the presence of sunlight. The U.S. Environmental Protection Agency (EPA) has designated the Sacramento Federal Ozone Nonattainment Area, which consists of Sacramento and Yolo Counties, the eastern portion of Solano County, the southern portion of Sutter County, and the western portions of El Dorado and Placer Counties up to the Sierra crest (SMAQMD 2013). Applicable ozone plans include the Placer County 1991 Air Quality Attainment Plan, the 1994 Sacramento Area

Regional Ozone Attainment Plan, and the 2006 Federal 8-Hour Ozone Rate-of-Progress Plan for the Sacramento Region.

Particulate matter is a mixture of solid and liquid particles suspended in air, including dust, pollen, soot, smoke, and liquid droplets. Two types of particulate matter are of concern: particulate matter 10 micrometers or less in diameter (PM_{10}), and particulate matter 2.5 micrometers or less in diameter ($PM_{2.5}$). An attainment determination was issued by U.S. EPA for the Sacramento $PM_{2.5}$ nonattainment area in 2013.

TABLE 3-1
WESTERN PLACER COUNTY ATTAINMENT STATUS

	Designation/Classification	
Criteria Pollutant	**Federal Primary Standards**	**State Standards**
Ozone (eight-hour)	Nonattainment/Severe	Nonattainment
PM_{10}	Unclassified	Nonattainment
$PM_{2.5}$	Nonattainment	Attainment
Carbon Monoxide (CO)	Unclassified/Attainment	Attainment
Nitrogen Dioxide (NO_x)	Unclassified/Attainment	Attainment
Sulfur Dioxide (SO_x)	Unclassified/Attainment	Attainment
Lead	Unclassified/Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility Reducing Particles	No Federal Standard	Unclassified

Source: ARB 2022.

In addition to the criteria pollutants, the California Air Resources Board has identified other air pollutants as toxic air contaminants (TACs) - pollutants that are carcinogenic (i.e., cause cancer) or that may cause other adverse short-term or long-term health effects. Diesel particulate matter, considered a carcinogen, is the most common TAC, as it is a product of combustion in diesel engines. It is present at some concentration in all developed areas of the state. Other TACs are less common and are typically associated with industrial operations.

The Placer County Air Pollution Control District (PCAPCD) is the regulatory agency responsible for developing air quality plans, monitoring air quality, and reporting air quality data for the Lincoln area. PCAPCD is also responsible for adopting and enforcing rules and regulations to achieve and maintain federal and state ambient air quality standards. The following PCAPCD rules are potentially applicable to this project:

> *Rule 202 - Visible Emissions:* A person shall not discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than three (3) in any one (1) hour which is:

a. As dark or darker in shade as that designated as No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or

b. Of such opacity as to obscure an observer′s view to a degree equal to or greater than does smoke described in Subsection (A) above.

Rule 217 - Cutback and Emulsified Asphalt Paving Materials: A person shall not discharge to the atmosphere volatile organic compounds caused by the use or manufacture of cutback or emulsified asphalts for paving, road construction or road maintenance, unless such manufacture or use complies with the provisions of this Rule.

Rule 228 - Fugitive Dust: To reduce the amount of particulate matter entrained in the ambient air, or discharged into the ambient air, as a result of anthropogenic fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. These include dust mitigation measures to be initiated at the start and maintained throughout the duration of construction or grading activity.

Environmental Impacts and Mitigation Measures

Table 3-2 shows the CEQA thresholds of significance established by the PCAPCD for pollutant emissions generated by construction activities. The thresholds are limited to three criteria pollutants: ROG, NO_x, and PM_{10}. Construction emissions are the focus of this analysis, as the project would not generate operational emissions, as explained later in this section.

TABLE 3-2
PCAPCD SIGNIFICANCE THRESHOLDS AND
PROJECT CONSTRUCTION EMISSIONS

Pollutant	PCAPCD Significance Threshold (pounds/day)	Project Construction Emissions (pounds/day)
ROG	82	4.08
NO_x	82	49.95
PM_{10}	82	10.33

Sources: RCEM ver. 9.0.0, PCAPCD 2016.

The Road Construction Emissions Model (RCEM) was used to estimate the pollutant emissions that would result from such equipment use. Although originally developed for road projects, the RCEM has been modified to provide emission estimates for projects that are linear in character, such as runway repair. The PCAPCD recommends the use of the RCEM for linear construction projects (PCAPCD 2017). The RCEM provides estimates in tons per construction period; these were converted to pounds per day to allow for comparison with the PCAPCD significance thresholds. The RCEM results are available in Appendix A of this document.

a) Air Quality Plan Consistency.

Table 3-2 shows the project construction emissions associated with the project, as estimated by the RCEM. As indicated by Table 3-2, project construction emissions would not exceed the PCAPCD significance thresholds. As the significance thresholds were established in part to ensure consistency with the objectives of the air quality plans applicable to western Placer County, project construction emissions would be consistent with these plans.

The project would have at most a minimal influence on air pollutant emissions associated with airport traffic. Airport traffic is a potential source of air pollutant emissions through the combustion of aircraft fuel. While proposed improvements to the project site may make Lincoln Regional Airport a more appealing stop for aircraft, airport traffic is more substantially influenced by factors independent of project improvements, such as increases in population and number of businesses, particularly those that use airport transportation for supplies and shipments.

While project emissions would not be significant, the project would still be required to comply with applicable PCAPCD rules and regulations, which would further reduce potential air quality impacts. As noted, PCAPCD Rule 228 contains measures to mitigate fugitive dust emissions during construction. Dust control provisions are routinely included in site improvement plans and specifications, along with construction contracts. Implementation of applicable PCAPCD rules would further reduce project emission impacts already considered less than significant.

b) Cumulative Emissions.

As noted in a) above, project construction emissions would not exceed PCAPCD significance thresholds. Construction emissions are temporary and would cease when work is completed. While the project would better accommodate air traffic, which would generate ongoing operational emissions, the project would have no impact on the volume of traffic. Therefore, the project would not generate any operational emissions that would contribute substantially to cumulative air quality issues in the Air Basin. The cumulative impacts of the project would be less than significant.

c) Exposure of Sensitive Receptors.

A “sensitive receptor” to air pollutant emissions is defined by the Lincoln General Plan Background Report as the following land uses: long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, child care centers, and athletic facilities (City of Lincoln 2008a). The nearest such land uses to the project site are rural residences along Airport Road to the west. The nearest rural residence is more than 1,500 feet away, or more than one-quarter mile. The only project emissions of concern are construction emissions. These emissions would cease when project work is completed and would dissipate before reaching the nearest residence. The project would have no impact related to exposure of sensitive receptors to emissions.

d) Odors and Other Emissions.

The project is not expected to generate significant odors, other than occasional temporary emissions from construction activities. Such emissions would be localized and would dissipate rapidly outside the project site. As noted above, the nearest sensitive receptors are rural residences along Airport Road, which are not expected to be exposed to any construction emissions, including any odors.

Potential health effects on sensitive receptors occur with long-term exposure to pollutants. This includes diesel particulate matter, a TAC often associated with construction activities, generated by construction equipment. However, as noted, construction impacts would cease with the completion of project work, and emissions would dissipate before reaching the nearest residence. Project impacts related to odors and other emissions are considered less than significant.

3.4 BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			✓	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				✓
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			✓	
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				✓
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				✓
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?				✓

NARRATIVE DISCUSSION

Environmental Setting

Vegetation and Wildlife

Two landcover types are identified within the project site – annual grassland and pavement. Annual grassland is found in all areas adjacent to the runway. These areas are managed for aviation safety; they are mowed several times a year and kept sculpted to maintain a relatively smooth surface. Vegetation growing in this area is entirely grasses and weeds, mostly weedy annual species. Common species observed include wild oat, Italian ryegrass, soft chess, Bermuda grass, medusahead, broad-leaf filaree, dove's-foot geranium, long-beaked hawkbit, wild radish, sheep sorrel, and rose clover. No vegetation occurs within the paved area or the area immediately adjacent to most of the hard surfaces (Salix Consulting 2021).

Much of the Lincoln Regional Airport provides limited habitat value for wildlife, due to normal airport operations and to ongoing site maintenance that results in disturbance to vegetative cover. However, the northern, southwestern, and southernmost portions of the airport support a wider diversity of wildlife because of the availability of important habitat features, including nesting sites, escape and thermal cover, and foraging areas. In addition, the channels and other wetland features located throughout the airport provide a source of water for wildlife in the nearby area. The channels and scattered seasonal wetlands provide seasonal nesting and foraging habitat for a variety of waterfowl and wading birds. Larger areas of open grassland, such as the areas surrounding the project site, are expected to provide year-round foraging habitat for resident raptors such as red-tailed hawk, and seasonal foraging habitat for migratory raptors that winter in the region, such as rough-legged hawk (City of Lincoln 2008c).

Aquatic Resources

Two categories of aquatic resources were mapped on the project site: vernal pool and ditch. A total of 21 vernal pools, approximately 0.923 acres in total area, were mapped on both sides and at the south end of the runway. The vernal pools are generally similar, ranging in depth from approximately three to eight inches and supporting a mix of vernal pool and seasonal wetland species. These include stalked popcorn-flower, coyote thistle, vernal pool buttercup, Italian ryegrass, long-beaked hawkbit, Mediterranean barley, broad-leaf filaree, and hyssop loosestrife. Many of these vernal pools are linear and are in a toe drain or along a drainage swale. These linear wetlands are considered vernal pools because they support a substantial vernal pool species component and have vernal pool hydrology (Salix Consulting 2021).

Two ditches are mapped on the project site. These features move water under the runway from east to west. They are framed by concrete headwalls and are relatively deep, trapezoidal channels (Salix Consulting 2021). Vegetation in the ditch areas appears similar to annual grassland. A third ditch has been identified north of the project site. This ditch collects runoff in the northern portion of the site and conducts the flows westerly through a series of

agricultural canals and into an unnamed tributary of Raccoon Creek three miles away (Salix Consulting 2021).

Habitat Conservation Plans

The proposed project is a covered activity of the Placer County Conservation Program (PCCP), which applies to western Placer County and specific areas where conservation activities will take place in neighboring Sutter County. The PCCP includes a joint federal Habitat Conservation Plan and state Natural Communities Conservation Plan, which provide regulatory coverage for species listed under the federal Endangered Species Act and the California Endangered Species Act, respectively. It also includes a County Aquatic Resources Program (CARP), which establishes a local program to protect wetlands, streams, and other aquatic resources in its Plan Area through the avoidance and minimization of impacts that could result from the covered activities. It provides for aquatic resources and the watersheds that support them while streamlining the Corps' Section 404 permitting and the Section 401 certification processes of the Regional Water Quality Control Board (RWQCB) for covered activities. A third component is an In-Lieu Fee Program, under which compensatory mitigation requirements under Section 404 of the Clean Water Act can be fulfilled by payment of a fee. The In-Lieu Fee Program will provide wetland mitigation "credits" that can be used to fulfill Section 404 compensatory mitigation requirements.

Environmental Impacts and Mitigation Measures

a) Special-Status Species.

Special-status species include plant and/or wildlife species that are legally protected under the federal Endangered Species Act, the California Endangered Species Act, or other laws and regulations, or are considered rare enough by the scientific community and trustee agencies to warrant special consideration. The latter includes plant species considered rare or endangered under the conditions of CEQA Guidelines Section 15380, such as those plant species identified on Lists 1A, 1B and 2 in the Inventory of Rare and Endangered Vascular Plants of California by the California Native Plant Society.

A Biological Assessment conducted for the Lincoln Regional Airport Master Plan in 2008 identified ten species listed as endangered, threatened, or proposed for listing under the federal Endangered Species Act. Of these ten species, seven were excluded from consideration due to lack of habitat. The remaining three species were Conservancy fairy shrimp, vernal pool fairy shrimp, and vernal pool tadpole shrimp (City of Lincoln 2008). Sampling for vernal pool shrimp was conducted within the project site itself from November 2021 to February 2022. The results of the sampling, summarized in a memorandum in Appendix B, indicated that the only vernal pool shrimp found was California fairy shrimp, which is not listed under either the federal or California Endangered Species Acts. No other fairy shrimp species, including listed species, were identified (Madrone Ecological Consulting 2022).

Under the criteria of the PCCP, vernal pools on the project site are considered constituent habitat for vernal pool fairy shrimp and vernal pool tadpole shrimp. As such, these vernal pools are subject to the requirements of Chapter 6 of the PCCP. Under the provisions of

PCCP Chapter 6, avoidance of habitat is preferred; however, impacts also can be mitigated through payment of fees and the collection and storage of seeds, cysts, eggs, spores, and similar inocula from impacted vernal pools for other vernal pool constituent habitats that will be created or restored elsewhere. Compliance with the provisions of PCCP Chapter 6 would reduce the impact on vernal pool species to a level that would be less than significant.

The Lincoln Regional Airport Master Plan EIR identified two other special-status species that could potentially occur on airport property: burrowing owl and western spadefoot toad. Both these species are listed as State Species of Special Concern. Burrowing owl is primarily associated with open, dry grasslands, deserts, agricultural areas, and rangeland. Based on the presence of suitable habitat and the known occurrence of this species within the region, it is expected that burrowing owl has some limited potential for occurrence (City of Lincoln 2007a). The PCCP contains provisions for the conservation of burrowing owl; therefore, compliance with the PCCP would reduce impacts on this species.

Scattered vernal pools, seasonal wetlands, wetlands swales and adjacent grassland provide potential habitat for western spadefoot toad. Based on the presence of potential breeding and upland habitat, and the proximity to other known occurrences in the region, it is expected that this species has a reasonable potential for occurring within scattered seasonal wetlands. The western spadefoot toad is not covered by the PCCP. However, the Airport Master Plan EIR identified mitigation to reduce impacts on this species. This mitigation, which is presented below, would reduce impacts on western spadefoot toad to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

BIO-1: Prior to the start of construction activities, a preconstruction survey for western spadefoot toad shall be conducted by a qualified biologist. If the species are identified as occurring on the airport, to compensate for the permanent loss of habitat, the City shall set aside and preserve areas within the airport to construct and manage new toad habitat. It is likely that toad habitat will correspond closely with fairy shrimp habitat; therefore, habitat creation and maintenance for the western spadefoot toad could be combined with that for fairy shrimp that is required under the provisions of the Placer County Conservation Program. However, if this is not feasible, then the City shall create and maintain additional toad habitat on the airport to replace the loss of habitat.

Significance After Mitigation: Less than significant

b) Riparian and Sensitive Habitats.

No riparian habitats are on the project site, as there are no surface streams. No sensitive habitats have been identified on the project site, other than vernal pools, which are discussed in c) below. The project would have no impact on riparian and other sensitive habitats.

c) State and Federally Protected Wetlands.

An Aquatic Resources Delineation was conducted for the project site in 2021; it is available in Appendix B of this IS/MND. The delineation was conducted according to the 1987 U.S. Army Corps of Engineers (Corps) Manual, as amended by the Arid West Regional Supplement. Two categories of aquatic resources were mapped on the project site: vernal pool and ditch. The delineation identified 21 vernal pools on the project site totaling approximately 0.923 acres, and two ditches totaling 0.015 acres (Salix Consulting 2021). These are potentially jurisdictional Waters of the United States that are subject to the permitting process of Section 404 of the federal Clean Water Act if fill or other materials are proposed to be placed in them.

The CARP, part of the PCCP, provides regulatory coverage for Sections 401 and 404 of the Clean Water Act for impacts to certain aquatic resources, including vernal pools. It has been determined that a vernal pool complex is within the project site that is subject to the CARP. It has been further determined that the impacts to the aquatic resources found within the project site can be addressed by the requirements of the CARP. The PCCP's In-Lieu Fee Program may also be used for mitigating the effects of the proposed project. Compliance with the applicable provisions of the PCCP and its CARP would reduce project impacts on State and federally protected wetlands to a level that would be less than significant.

d) Fish and Wildlife Movement.

There are no streams on or near the project site, so the project would not affect fish or other species that may use streams as movement corridors. Given the existing runway development and lack of trees, it is unlikely that the project site would be used as a wildlife movement corridor or a nesting area for migratory birds. The project would have no impact on fish or wildlife movement.

e) Local Biological Resource Requirements.

The Open Space and Conservation Element of the Lincoln General Plan contains several policies that encourage the protection of biological resources such as oak trees, wetlands, and sensitive vegetation and wildlife habitat. However, the City has not enacted any ordinances that protect biological resources. Protection measures are implemented by federal and State regulations and the PCCP (see below). The project would have no impact on local biological requirements.

f) Conflict with Habitat Conservation Plans.

As noted, the proposed project is a covered activity of the PCCP. The elements of the PCCP provide regulatory coverage for the federal Endangered Species Act, the California Endangered Species Act, and Sections 401 and 404 of the federal Clean Water Act for impacts to certain aquatic resources. The project would be required to comply with PCCP conservation requirements; alternatively, it may participate in the PCCP's In-Lieu Fee Program to reduce its impacts on aquatic resources. The project would have no impact related to conflict with habitat conservation plans.

3.5 CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?				✓
b) Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5?		✓		
c) Disturb any human remains, including those interred outside of formal cemeteries?			✓	

NARRATIVE DISCUSSION

Environmental Setting

Information for this section comes primarily from a Cultural Resources Inventory conducted for the project site by Natural Investigations Company. Preparation of the inventory involved a literature search, geoarchaeological and paleontological sensitivity analyses, and an intensive pedestrian survey of the Area of Potential Effects, which included the project site. A copy of the Cultural Resources Inventory is provided in a confidential Appendix C. Due to the sensitive information the inventory contains, it is available only to qualified reviewers at the office of the Planning Division of the City of Lincoln, 600 6th Street, Lincoln, CA.

The project area lies within the ethnographic territory of the Nisenan, or Southern Maidu. Section 3.18, Tribal Cultural Resources, discusses the Nisenan in more detail.

Placer County was organized in 1851 from parts of neighboring Sutter and Yuba Counties and was named after its principal source of revenue at that time, placer mining. The earliest settlers in Placer County arrived in the late 1840s, as miners poured into the region in search of placer deposits. By the mid-1850s the area was sparsely settled and dotted with small-scale ranches. By the mid-1860s, the construction and development of the railroad industry played a significant role in the region's development. Tracks of the Central Pacific Railroad, incorporated in 1861 to build the western portion of the First Transcontinental Railroad, reached Roseville, Rocklin, and Newcastle in 1864. The presence of the railroad contributed to the growth of Placer County's agricultural industry, mainly fruits and nuts, since the rail line provided access to a large market east of the Sierra Nevada (Natural Investigations Company 2021).

European settlement of the Lincoln area began during the California Gold Rush. Although not one of the more important gold-producing areas, the Lincoln area was agriculturally productive, and early settlements were located along the roads to the gold fields. Arriving in the late 1850s, the first settlers in the Lincoln area engaged in wheat production and cattle ranching. An early settler, Charles Lincoln Wilson, actively promoted the construction of the California Central Railroad, which was completed from Folsom to Lincoln on October 31,

1861. The establishment of the railroad accelerated the shipment of wheat, boosted other local markets, and contributed to the growth of Lincoln' s population, which rose from nearly 500 inhabitants in 1863 to more than 1,400 by 1910. In 1873, coal was discovered near Lincoln and coal mining continued well into the 1880s. Then, the accidental discovery of clay deposits in 1874 led to the establishment of a large pottery manufacturing business in Lincoln. Charles Gladding, Peter McBean, and George Chambers erected a kiln in 1875. This company continues to produce clay products today, including architectural terra cotta detail work (City of Lincoln 2007a).

Airport History

Plans for development by the War Department for the Lincoln Auxiliary Field for Mather Flying School were in progress by July 1942. The airfield facility was built as an auxiliary airfield for the Advanced Flying School of the Army Air Corps at Mather Field near Sacramento, and the primary use of this auxiliary field was to provide a location for emergency landings and general training in support of operations at Mather Field. Lincoln Air Field was built to a standard design consisting of three 4,000-foot runways arranged in a triangle, with a fourth runway 3,463 feet long bisecting the triangle. The airfield was maintained and operated by a small detachment from Mather Field's 77th Air Base Group and its successor unit, the 1505th U.S. Army Air Corps Base Unit. Use of the Lincoln Air Field by the Army Air Corps was relatively short term. The airfield was declared surplus government property and was taken over by the United States Army Corps of Engineers in February 1945 (City of Lincoln 2007a).

On August 12, 1946, the War Assets Administration issued an interim license to the City of Lincoln to operate a municipal airport on the site, pending a formal conveyance. A deed that quitclaimed the 627.87 acres from the War Department to the City of Lincoln was signed in January 1947. From 1946 until 1977, the City operated the airport from the old military structures on the west side of the airport. In 1977, the City entered into a Joint Powers Agreement with Placer County for operation of the airport, although the City never relinquished ownership. As a result of this agreement, the Lincoln Airport Authority was created. The Lincoln Airport Authority built new facilities on the eastern side of the property and refurbished the runways. In 1986, the Joint Powers Agreement between the City and County was terminated, and control of the airport reverted to the City of Lincoln (City of Lincoln 2007a). The Lincoln Regional Airport is currently managed by a division of the City's Department of Public Works.

Environmental Impacts and Mitigation Measures

a) Historical Resources.

A Cultural Resources Inventory, available in Appendix C of this IS/MND, was conducted for the project site by Natural Investigations Company. Preparation of the inventory involved a literature search, geoarchaeological and paleontological sensitivity analyses, and an intensive pedestrian survey of the Area of Potential Effects, which included the project site. The results of the inventory indicated the presence of one historical resource – the Lincoln Auxiliary Field, which consists of the remains of the World War II-era military airport, including the remnant asphalt runways, structure foundations, and a parking lot. All the

constituent features have been severely impacted by the construction of the modern airport facilities, as well as focused demolition and neglect. A past evaluation of the site concluded that it is ineligible for listing in both the National Register of Historic Places and California Register of Historical Resources (Natural Investigations Company 2021). Because of this, the project would have no impact on historical resources.

b) Archaeological Resources.

The records search indicates that no cultural resources have been previously recorded within the project site, and no previously unrecorded cultural resources of any kind were identified during the field survey. Geoarchaeological analysis finds that the project site is underlain by Middle Pleistocene-aged (450,000 to 130,000 years ago) alluvium of the Riverbank Formation, with Cometa soils formed at their surface (see Section 3.7, Geology and Soils). These soil types are very unlikely to have buried archaeological resources (Natural Investigations Company 2021).

A small area on the northern end of the project site is underlain by Late Holocene-aged (2,000 to 150 years ago) soils of the San Joaquin Series, which are more sensitive for buried resources. Several site-specific variables reduce this sensitivity significantly, particularly the extent of past disturbance from the construction of the airport runway and related infrastructure (Natural Investigations Company 2021). Nevertheless, it is conceivable that construction work associated with the proposed project could encounter archaeological materials that are currently unknown. Procedures to address archaeological discoveries if they should occur are set forth in the mitigation measure below. Implementation of this mitigation measure would reduce archaeological resource impacts to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

CULT-1: If any subsurface archaeological resources are encountered during project construction, the City shall be immediately notified and all construction activities within a 30-foot radius of the encounter shall be immediately halted until a qualified archaeologist can examine these materials, evaluate their significance and, if potentially significant, recommend measures on the disposition or conservation of the resource. Recommended measures could include, but are not limited to, 1) preservation in place, or 2) excavation, recovery, and curation by qualified professionals. The City or its contractor shall be responsible for retaining qualified professionals, implementing recommended mitigation measures, and documenting mitigation efforts in written reports to the City.

Significance After Mitigation: Less than significant

c) Human Burials.

Given development of the project site and vicinity, it is unlikely that any intact human burials would be encountered. The Cultural Resources Inventory considered human burials on the project site to be unlikely. However, the inventory also stated that the discovery of human remains is always a possibility (Natural Investigations Company 2021). Should any human remains be encountered during project construction, construction activities could have a potentially significant adverse impact, especially if the remains are of Native American origin.

California Health and Safety Code Section 7050.5 sets forth procedures regarding these discoveries, except on federal lands. This section states that no further disturbance may occur until the Placer County Coroner has determined of origin and disposition of the remains pursuant to PRC Section 5097.98. The County Coroner must be notified of the find immediately upon discovery. If the human remains are determined to be of Native American origin, the County Coroner will notify the Native American Heritage Commission, which will determine and notify a Most Likely Descendent. The Most Likely Descendent must complete an inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

Compliance with the provisions of Health and Safety Code Section 7050.5 would reduce impacts related to human burials to a level that would be less than significant. Refer to Section 3.18, Tribal Cultural Resources, for a discussion of potential impacts on tribal cultural resources, including Native American burials.

3.6 ENERGY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?			✓	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				✓

NARRATIVE DISCUSSION

Environmental Setting

Electricity is a major energy source for residences and businesses in California. In Placer County, based upon the most recent information available, electricity consumption in 2020 totaled approximately 2,296 million kilowatt-hours, of which approximately 1,388 million kilowatt-hours were consumed by non-residential uses (CEC 2022a). In 2020, natural gas consumption in Placer County totaled approximately 92 million therms, of which approximately 26 million therms were consumed by non-residential uses (CEC 2022b).

a) Project Energy Consumption.

Project construction would involve fuel consumption and use of other non-renewable resources. Construction equipment used for such improvements typically runs on diesel fuel or gasoline. The same fuels typically are used for vehicles that transport equipment and workers to and from a construction site. Construction-related fuel consumption would be finite, short-term, and consistent with construction activities of a similar character. This energy use would not be considered wasteful, inefficient, or unnecessary.

Electricity may be used for equipment operation during construction activities. It is expected that more electrical construction equipment would be used in the future, since it generates no air pollutants. Electrical consumption by this equipment would be consistent with construction activities of a similar character; therefore, the use of electricity in construction activities would not be considered wasteful, inefficient, or unnecessary, especially since fossil fuel consumption would be reduced.

Project operations are expected to use little energy, mainly lighting for navigational purposes. The new proposed lighting is not expected to substantially increase energy use from current consumption. As noted in Chapter 2.0, Project Description, the proposed new PAPI systems would not rely on a power control unit. Project operations would not lead to energy consumption that would be considered wasteful, inefficient, or unnecessary. Project impacts related to energy consumption are considered less than significant.

b) Consistency with Energy Plans.

The City does not have adopted plans for renewable energy or energy efficiency. Likewise, the Lincoln Regional Airport Master Plan has no renewable energy or energy efficiency plans. However, as discussed in a) above, the project is not expected to lead to wasteful, inefficient, or unnecessary consumption of energy. The project would have no impact related to energy plans.

3.7 GEOLOGY AND SOILS

Would the project:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)				✓
ii) Strong seismic ground shaking?			✓	

iii) Seismic-related ground failure, including liquefaction?			✓	
iv) Landslides?				✓
b) Result in substantial soil erosion or the loss of topsoil?			✓	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			✓	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			✓	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				✓
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		✓		

NARRATIVE DISCUSSION

Environmental Setting

The Geologic Map of the Sacramento Quadrangle designates the underlying geology of the project site as the Riverbank Formation (Wagner et al. 1981), which was confirmed by geoarchaeological analysis conducted as part of the Cultural Resources Inventory available in Appendix C of this IS/MND. The Riverbank Formation, ranging in depth from one to more than 200 feet, consists of weathered gravel, sand, and silt (DWR 2014).

The topography of the project site, as with all of Lincoln Regional Airport, is essentially flat. A custom soil survey downloaded from the Natural Resources Conservation Service website indicates two soil types underlay the project site (SCS 1980; NRCS 2022):

- Cometa-Ramona sandy loams, 1 to 5 percent slopes (identified as 142 in Figure 3-1). This soil type consists of approximately 50% Cometa soil and 30% Ramona soil. Both types are deep, well-drained soils formed in alluvium from granitic sources. Permeability of Cometa-Ramona soil ranges from moderately slow to very slow. Surface runoff ranges from slow to medium. The water erosion hazard is slight. The expansive (shrink-swell) potential of this soil is generally low, but a layer of Cometa soil 18 to 29 inches below ground surface has a high expansive soil potential. Most of the project site is underlain by this soil type.

- San Joaquin-Cometa sandy loams, 1 to 5 percent slopes (identified as 182 in Figure 3-1). This soil type consists of approximately 40% San Joaquin soil and 30% Cometa soil. Both soils have a claypan; the San Joaquin soil has a hardpan beneath the

claypan. San Joaquin soil is a well-drained soil that is moderately deep over a hardpan. This soil is formed in alluvium from granitic sources. The permeability of San Joaquin-Cometa soil is very slow. Runoff is slow, and the water erosion hazard is slight. The expansive (shrink-swell) potential of this soil is generally low, but a layer of Cometa soil 18 to 29 inches below ground surface has a high expansive soil potential. This soil type is confined to the portion of the project site around the northern end of Runway 15-33.

SOURCE: USDA NRCS Custom Soils Report

Figure 3-1
SOIL TYPES

The nearest faults to the airport are the Spenceville/Deadman fault and the Wolf Creek Fault, both 10 to 15 miles east in the Sierra Nevada. Neither fault has been active within the last 11,000 years. The airport is located 90 miles east of the San Francisco Bay Area and lies within Seismic Risk Zone 3. Earthquakes in Seismic Risk Zone 3 pose a lesser risk than those experienced in Zone 4, such as in the San Francisco Bay Area. Consequently, the airport and surrounding area may be affected by regionally occurring earthquakes; however, impacts resulting from such an event would be less in nature than those experienced in the Bay Area (City of Lincoln 2007a).

Paleontological resources are fossils or groups of fossils that are unique, unusual, rare, uncommon, or important, and those that add to an existing body of knowledge in specific areas. Few, if any, paleontological resources occur on the airport. The Riverbank Formation is comprised of outwash material from the western side of the Sierra Nevada and is not typically a fossil-bearing formation (City of Lincoln 2007a). A search of the paleontological records maintained by the University of California Museum of Paleontology indicated that 64 fossil localities have been recorded in Placer County. The Lincoln Clay Pit locality east of Lincoln produced three Miocene-aged (23.03 to 5.3 million years ago) vertebrate fossils from a deposit of sands and gravels, including the remains of a bony fish, mammal, and reptile (Natural Investigations Company 2021).

Environmental Impacts and Mitigation Measures

a-i) Fault Rupture Hazards.

As noted, there are no active or potentially active faults within or near the project site. The project site is not within or near a designated Alquist-Priolo Earthquake Fault Zone (California Geological Survey 2017). The project would have no impact related to fault rupture.

a-ii, iii) Seismic Ground Shaking and Seismic-Related Ground Failure.

The project site is potentially subject to seismic shaking from active faults outside San Joaquin County. Geologic hazards include such phenomena as liquefaction. Liquefaction is a condition in which seismic ground shaking can temporarily transform an otherwise solid, granular material to a fluid state, typically in areas of moist, loose soils. Western Placer County and the airport are in a region of low seismic potential (City of Lincoln 2007a).

To reduce or mitigate potential hazards from earthquakes or other local geologic hazards, the City ensures that development will continue to be completed in compliance with local and State regulations. These regulations include the California Building Code, the Uniform Building Code, the Alquist-Priolo Earthquake Fault Zoning Act, and the Seismic Hazard Mapping Act. The City of Lincoln General Plan requires all new development to be designed and constructed to minimize risk from geologic and seismic hazards, with geotechnical investigations to be performed prior to any planning or construction activities (City of Lincoln 2008b). The results and recommendations of the geotechnical investigation would be incorporated with final design and construction plans. With implementation of the required geotechnical investigation and applicable codes, project impacts related to seismic shaking and seismic ground failure would be less than significant.

a-iv) Landslides.

The project site is in a topographically flat area; as such, there is no landslide hazard associated with the project site. The project would have no impact related to landslides.

b) Soil Erosion.

The construction and grading associated with site preparation and construction of the project would temporarily increase the exposure of soils on the project site to water and wind erosion. Since construction activities are anticipated to disturb at least one acre of land area, the project would need to obtain a Construction General Permit from the SWRCB, in accordance with Lincoln Municipal Code Chapter 13.30 that was implemented to ensure compliance with the City's Phase II National Pollutant Discharge Elimination System (NPDES) Permit (see Section 3.10, Hydrology and Water Quality). The Construction General Permit would require preparation of a Storm Water Pollution Prevention Plan (SWPPP) by a Qualified SWPPP Developer. The SWPPP would include implementation of Best Management Practices (BMPs) to avoid or minimize adverse water quality impacts from erosion and sedimentation. BMPs fall within the categories of Temporary Soil Stabilization, Temporary Sediment Control, Wind Erosion Control, Tracking Control, Non-Storm Water Management, and Waste Management and Materials Pollution Control.

In addition, the project would be required to implement applicable erosion controls and standards as set forth in the West Placer County Storm Water Quality Design Manual, which is discussed in Section 3.10. With implementation of these measures, project impacts related to soil erosion would be less than significant.

c) Geologic Instability.

Existing soil and geological conditions on the project site are similar to those throughout most of the Lincoln area. The project site and vicinity are topographically flat, so no landslides or lateral spreading would occur. As noted above, subsidence and liquefaction are unlikely to occur. A pavement evaluation study for the project site did not identify any unstable geological conditions, other than expansive soils that are discussed in d) below (Brandley 2015). The project would be constructed in accordance with the California Building Code, which has provisions designed to ensure stability of structures. Project impacts related to geological instability would be less than significant.

d) Expansive Soils.

As noted, Cometa soils have a high expansive soil potential at one of its layers. Expansive soils have the potential to compromise the structural integrity of proposed facilities such as the runway and taxiway approaches. A pavement evaluation study was conducted on Runway 15-33, the taxiways, and the aprons in 2007. The study was updated in 2015. This study found that in a few areas on the edge of the parallel Taxiway A, severe cracking has occurred within the outer 12 to 18 inches of pavement. Clay soils near the surface were determined to be the cause of this cracking (Brandley 2015).

However, the pavement evaluation study did not identify any deficiencies on Runway 15-33 occurring because of expansive soils. Significant cracking of the pavement on the runway

has occurred due to thermal stresses (Brandley 2015). The proposed reconstruction of Runway 15-33 is consistent with the recommended action in the pavement evaluation study, which did not make recommendations that addressed expansive soils. Other features of the proposed project would not be substantially affected by expansive soils if they exist. Project impacts related to expansive soils would be less than significant.

e) Adequacy of Soils for Sewage Disposal.

The project is the reconstruction of a runway and related minor improvements. It would not generate any wastewater. No on-site sewage disposal systems are proposed, so the adequacy of on-site soils for such systems is irrelevant. The project would have no impact related to soil adequacy for sewage disposal.

f) Paleontological Resources.

As noted, the project site is underlain by the Riverbank Formation, which is not typically a fossil-bearing formation. As no fossils and no unique geologic features have been recorded within the project site, and the underlying deposits of the Riverbank Formation are not known to contain paleontological resources locally, the paleontological resource sensitivity of the project site is considered low (Natural Investigations Company 2021).

However, it is conceivable that currently unknown paleontological resources could be uncovered during project construction work that involves deeper excavation, particularly since fossils have been recovered near Lincoln. Mitigation described below would require work to be stopped if paleontological resources are uncovered until these resources can be evaluated by a qualified paleontologist and recommendations made for their proper disposition. Implementation of this mitigation measure would reduce paleontological resource impacts to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

GEO-1: If any subsurface paleontological resources are encountered during project construction, the City shall be immediately notified and all construction activities within a 30-foot radius of the encounter shall be immediately halted until a qualified paleontologist can examine these materials, evaluate their significance and, if potentially significant, recommend measures on the disposition or conservation of the resource. Recommended measures could include, but are not limited to, 1) preservation in place, or 2) excavation, recovery, and curation by qualified professionals. The City or its contractor shall be responsible for retaining qualified professionals, implementing recommended mitigation measures, and documenting mitigation efforts in written reports to the City.

Significance After Mitigation: Less than significant

3.8 GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✓	
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			✓	

NARRATIVE DISCUSSION

Environmental Setting

GHG Background

A greenhouse gas (GHG) is a gas that absorbs and emits radiation within the thermal infrared range, trapping heat in the earth's atmosphere. There are several types of GHGs, which are both naturally occurring and generated by human activity. Increased atmospheric concentrations of GHGs are considered a primary contributor to global climate change, which is a subject of concern for the State of California. Potential climate change impacts in the Sacramento Valley area, which includes the western part of Placer County, would include more extreme heat waves, more intense droughts, floods with less predictability, and increased risk of wildfires (Houlton and Lund 2018).

GHG emissions in California in 2019, the most recent year for which data are available, were estimated at approximately 418.2 million metric tons carbon dioxide equivalent (CO_2e) – a decrease of approximately 14.6% from the peak level in 2004. Transportation was the largest contributor to GHG emissions in California, with almost 40% of total emissions. Other significant sources include industrial activities, with approximately 21% of total emissions, and electric power generation, both in-state and imported, with approximately 14% of total emissions (ARB 2021).

Unlike the criteria air pollutants described in Section 3.3, Air Quality, GHGs have no "attainment" standards established by the federal or State government. In fact, GHGs are not generally thought of as traditional air pollutants because their impacts are global in nature, while air pollutants mainly affect the general region of their release to the atmosphere. Nevertheless, the U.S. Environmental Protection Agency has found that GHG emissions endanger both the public health and public welfare under Section 202(a) of the Clean Air Act due to their impacts associated with climate change (EPA 2009).

Regulatory Framework

The State of California has implemented GHG emission reduction strategies through Assembly Bill (AB) 32, the Global Warming Solutions Act of 2006, which requires total statewide GHG emissions to reach 1990 levels by 2020, or an approximately 29% reduction from 2004 levels. Total state GHG emissions in 2019 were almost 13 million metric tons CO_2e below the 2020 target established by AB 32 (ARB 2021).

In 2016, Senate Bill (SB) 32 became law. SB 32 extends the GHG reduction objectives of AB 32 by mandating statewide reductions in GHG emissions to levels that are 40% below 1990 levels by the year 2030. The State has adopted a 2017 Scoping Plan that sets forth strategies for achieving the SB 32 target, which is 260 million metric tons CO_2e. Most of these are State measures, such as use of the cap-and-trade program, the Short-Lived Climate Pollutant Plan, and achievement of the 50% renewable sources of electricity in the Renewables Portfolio Standard. It continues many existing programs such as low-carbon fuel standards, renewable energy, and methane reduction strategies, along with a proposed 20% reduction in GHG emissions from refineries. It also addresses for the first time GHG emissions from the natural and working lands of California, including the agriculture and forestry sectors (ARB 2017). The 2017 Scoping Plan is in the process of being updated.

The City currently does not have a GHG emission reduction plan, also known as a Climate Action Plan. The Lincoln General Plan has no policies that explicitly address GHG emissions, other than policies that encourage shade tree planting and that require parking lots to be at least 50% shaded by trees. Both policies were identified as encouraging reductions in GHG emissions.

Environmental Impacts and Mitigation Measures

a, b) Project GHG Emissions and Consistency with GHG Reduction Plans.

Estimates of GHG emissions of the project were developed using the RCEM program (see Section 3.3, Air Quality and Appendix A). The RCEM results indicate that the project would generate approximately 7.3 metric tons CO_2e of GHG emissions during project construction. The PCAPCD has set a significance threshold of 10,000 metric tons CO_2e annually for construction emissions (PCAPCD 2017). The estimated project construction GHG emissions would be substantially below this threshold. Based on the information provided above, the project would be consistent with GHG reduction plans of the State on mitigation of GHG emissions.

Airport traffic is a potential source of GHG emissions through the combustion of aircraft fuel. While improvements to the project site may make Lincoln Regional Airport a safer and more appealing stop for aircraft, airport traffic is more substantially influenced by factors independent of project improvements, such as increases in population and number of businesses, particularly those that use airport transportation for supplies and shipments. The project would have at most a minimal influence on GHG emissions associated with airport traffic. Project impacts related to GHG emissions and consistency with GHG emission reduction plans would be less than significant.

3.9 HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				✓
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			✓	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				✓
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				✓
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				✓
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				✓
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				✓

NARRATIVE DISCUSSION

Environmental Setting

Hazardous material sites of all statuses are recorded in the GeoTracker database, maintained by the SWRCB, and the EnviroStor database, maintained by the Department of Toxic Substances Control (DTSC). A search of the GeoTracker database indicated a Cleanup Program Site at 1020 Airport Road, west of the project site. Identified as Weco Aerospace Systems, the site was first reported in 1965 for groundwater contamination. Pumping and treatment at the site began in 2002 and ended in 2009. It was reported that the groundwater plume of the contaminant 1,2-DCA is very small and appears to be stable or shrinking. Further pumping and treatment was not deemed necessary as concentrations of 1.2-DCA were approaching the public health goal (SWRCB 2022).

A search of the EnviroStor database indicated a State Response site at Lincoln Airport, formally titled Lincoln Auxiliary Field. This site was designated a Formerly Used Defense Site. The U.S. Army Corps of Engineers submitted a letter to the DTSC in 2008 stating that there was no evidence of contamination on the site and that no further action by the Department of Defense was indicated. After requesting additional information, the DTSC concurred with the finding in 2010, and no further action was taken (DTSC 2022).

A list of solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside the waste management unit did not show any locations in the County (CalEPA 2021a). Likewise, a list by SWRCB containing sites under Cease and Desist Orders and Cleanup and Abatement Orders showed no locations on or near the project site (CalEPA 2021b).

Environmental Impacts and Mitigation Measures

a) Hazardous Material Transportation, Use, and Storage.

The project is the reconstruction of a runway and other minor improvements. The project would not involve the use of hazardous materials once construction work is completed. No hazardous materials would need to be transported or stored to support project operations. The project would have no impact on hazardous material transportation, use, and storage.

b) Upset and Accident Conditions.

Construction activities on the project site may involve the use of hazardous materials typical for such activities, such as fuels and solvents, and thus create a potential for hazardous material spills. Construction and maintenance vehicles would transport and use fuels in ordinary quantities. Fuel spills, if any occur, would be minimal and would not typically have significant adverse effects. In accordance with SWPPP requirements (see Section 3.7, Geology and Soils), contractors have absorbent materials at construction sites to clean up minor spills.

As noted in a) above, no hazardous materials would be used or stored for the project once construction work is completed. Any releases on the project site would be associated with aircraft operations, such as accidental fuel releases. Such incidents would occur independent of the project, and the project would not affect the potential risk of release. Project impacts related to upset or accident conditions would be less than significant.

c) Release of Hazardous Materials near Schools.

The nearest school to the project site is Creekside Oaks Elementary School, approximately two miles southeast of Runway 15-33. As noted in b) above, releases associated with construction activities would be minimal; therefore, they are unlikely to reach this school. No hazardous material releases would occur after project construction work is completed. The project would have no impact related to hazardous material releases near schools.

d) Hazardous Material Sites.

As noted, a search of the GeoTracker and EnviroStor databases, along with SWRCB lists, identified two hazardous material sites on or near the project site. One site, on which a groundwater contamination plume was identified, is west of the project site and was deemed to need no further treatment, as the plume appeared to be stable or shrinking. In addition, as noted in Section 3.10, Hydrology and Water Quality, the groundwater gradient is generally to the southwest, so no contamination is expected to travel towards the project site. The other site had no evidence of contamination and that no further action would be taken. No hazardous material sites were recorded for the project site itself. It is not expected that project construction would encounter any soil contamination. The project would have no impact on hazardous material sites.

e) Public Airports.

The project is the reconstruction of Runway 15-33 with additional improvements, which would occur on the Lincoln Regional Airport property. It would not place residents or businesses in an area potentially subject to hazards from airport operations. The project would have no impact related to public airport hazards.

f) Emergency Response and Evacuations.

Project construction work would occur on airport property in the area of Runway 15-33. The project would not obstruct any local roads either during or after construction. Therefore, the project would not obstruct access for emergency vehicles or evacuations on local roads. Access to the runway for emergency vehicles would be maintained after project completion. The project would have no impact related to emergency vehicle access or evacuations.

g) Wildland Fire Hazards.

The project site is within an existing maintained airport property. While there are open space areas adjacent to the airport that could be exposed to wildfire risk, these are mowed and maintained areas. Proposed runway reconstruction would not place any flammable substances in the area. The project would not increase the risk of wildland fire and therefore would have no impact related to wildland fire hazards. Section 3.20, Wildfire, discusses this issue in more detail.

3.10 HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			✓	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project				✓

may impede sustainable groundwater management of the basin?				
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river runoff or through the addition of impervious surfaces, in a manner which would:				
i) Result in substantial erosion or siltation on- or off-site?				✓
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?				✓
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				✓
iv) Impede or redirect flood flows?				✓
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				✓
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			✓	

NARRATIVE DISCUSSION

Environmental Setting

Surface Waters

There are no natural surface streams on the Lincoln Regional Airport property. As noted in Section 3.4, Biological Resources, two ditches flow beneath the airport runway from east to west. Outside of vernal pools, there are no other surface waters on the project site. Both the vernal pools and ditches contain water only during the rainy season; they have no water during the dry season.

Surface water drainage patterns on and around the airport were altered during its construction in 1942. The westerly flowing drainages that begin east of the airport were intercepted, diverted, and channelized around the easternmost runway. Surface drainage from the airport now flows primarily into Dutch Ravine, a natural drainage along the airport's western boundary that is a tributary to Markham Ravine. The largely undeveloped northern portions of the airport drain northwesterly into the Bunkham Slough and Raccoon Creek drainages.

Within the airport, surface water drainage is controlled by a system of drainage swales that collects and drains storm water around the runway and taxiways and ultimately directs flows into Dutch Ravine west of the airport. On the project site, the runway surface is crowned, and surface water sheds easterly or westerly toward "toe drains" at the base of the crown.

These drains are not all graded to drain and have formed depressional areas, some of which support wetlands. Most of the wetlands within the project site occur along these toe drains (Salix Consulting 2021).

Generally, water trends north in the northern portion of the project site to a small ditch and then westerly to an unnamed tributary to Raccoon Creek (see Section 3.4, Biological Resources). Water in the southern portion of the project site flows north to the main ditch transecting the airport or south towards the ditch at end of the runway. Both these ditches flow west and converge just offsite into Dutch Ravine. From the point of convergence, Dutch Ravine flows approximately one mile before entering Markham Ravine. Both Raccoon Creek and Markham Ravine eventually drain into the Cross Canal, which eventually drains into the Sacramento River (Salix Consulting 2021).

Groundwater

Lincoln Regional Airport is located near the eastern boundary of the 351,000-acre North American Subbasin of the Sacramento Valley Groundwater Basin. Little or no groundwater flows into or out of the groundwater basin from the Sierra Nevada along the eastern edge. Groundwater recharge areas for the aquifers underlying the City are generally limited to the Raccoon Creek, Doty Ravine, Markham Ravine, Auburn Ravine, Ingram Slough, and Orchard Creek stream channels. The shallowest groundwater aquifers beneath the airport range in depth from about 40 to 60 feet below the existing ground surface. Deeper groundwater producing zones for the region, usually in buried Tertiary stream channels, range in depth from approximately 250 to 400 feet below the existing ground surface. The groundwater gradient in the region is generally southwest (City of Lincoln 2007a).

In 2014, the California Legislature passed the Sustainable Groundwater Management Act. The legislation provides a framework for sustainable management of groundwater supplies by local authorities, with a limited role for state intervention when necessary to protect the resource. The legislation lays out a process and a timeline for local authorities to achieve sustainable management of groundwater basins, part of which requires the preparation of a Groundwater Sustainability Plan. The Sustainable Groundwater Management Act requires that Groundwater Sustainability Plans for critically overdrafted basin be prepared and adopted by January 31, 2020. For basins designated as having a High or Medium priority, Groundwater Sustainability Plans must be adopted by January 31, 2022.

The North American Subbasin is classified as a High priority subbasin. A collaboration of five Groundwater Sustainability Agencies has worked on a Groundwater Sustainability Plan for the North American Subbasin. These agencies include the West Placer Groundwater Sustainability Agency, of which the City is a member (City of Lincoln 2021). The Groundwater Sustainability Plan for the Subbasin was submitted to DWR on January 24, 2022. The goal of the plan is to manage groundwater resources sustainably for beneficial uses and users to support the lasting health of the Subbasin's community, economy, and environment. This would be accomplished through the monitoring and management of established sustainability management criteria, continued expansion of conjunctive management of groundwater and surface water, proactively working with local well permitting and land use planning agencies on effective groundwater policies and practices,

continued Groundwater Sustainability Agency coordination and stakeholder engagement; and continued improvement of understanding of the Subbasin (GEI Consultants 2021).

Flooding

Lincoln Regional Airport is not located within either a 100-year or 500-year floodplain, as designated on maps prepared by the Federal Emergency Management Agency. The closest designated 100-year flood plain is along Markham Ravine south and east of the airport. Regionally, most of the surface drainages are susceptible to winter storm flooding. However, as noted above, there are no natural surface streams on airport property.

Water Quality

The 1972 amendments to the Federal Water Pollution Control Act, also known as the Clean Water Act, established the NPDES permit program to control discharges of pollutants from point sources. The 1987 amendments to the Clean Water Act created a new section devoted to storm water permitting. The EPA has granted the State of California primacy in administering and enforcing the provisions of the Clean Water Act and the NPDES permit program. This authority was delegated to the SWRCB and associated RWQCBs.

The Central Valley RWQCB is responsible for issuing NPDES permits. NPDES Municipal Separate Storm Sewer System (MS4) Permits require municipalities to implement a variety of programs to prevent pollution, improve and protect storm water quality, reduce storm water runoff, and enhance the ecologic vitality of local creeks and waterways. The west Placer County region, which includes the City of Lincoln, is subject to SWRCB Water Quality Order No. 2013-001-DWQ, NPDES General Permit No. CAS000004, Waste Discharge Requirements for Storm Water Discharges from Small MS4s (Phase II MS4 Permit).

To ensure compliance with the requirements of the Phase II MS4 Permit, the West Placer County Storm Water Quality Design Manual was developed. The manual provides guidance for projects that are required to comply with Clean Water Act regulations, and it presents Low Impact Development design standards to reduce runoff, treat storm water, and provide baseline hydromodification management.

Environmental Impacts and Mitigation Measures

a) Water Quality.

As noted above, there are no streams or other bodies of water on or near the project site. Project construction, with associated ground disturbance, could lead to the conveyance of sediments in storm water; such sediments would be directed to the City storm drainage system and potentially to surface waters. As described in Section 3.7, Geology and Soils, construction that causes one acre of ground disturbance or more is required to obtain a Construction General Permit, which contains provisions designed to reduce impacts on water quality. Also, as noted in Section 3.3, Air Quality, construction activities would involve dust control measures that would include the use of water to wet areas of ground disturbance. This water is unlikely to enter any streams and would not be applied once project work is completed.

It is expected that any drainage on the project site would most likely percolate into the nearby open ground. As noted, the depths to the shallowest aquifers range from 40 to 60 feet below surface. Because of this, the project is not expected to contribute to adverse surface or groundwater quality effects. Project impacts on surface and groundwater quality would be less than significant.

b) Groundwater Supplies and Recharge.

Two groundwater wells in the southern portion of the airport supply water to airport operations. However, the project would require no use of water; therefore, it would not place any demands on surface or groundwater supplies used by the City. The proposed project would not result in a net increase the impervious surface area on the site, so it would have no effect on existing recharge conditions. The project would have no impact on groundwater supplies or recharge.

c-i, ii, iii) Drainage Patterns and Runoff.

The project proposes to reconstruct an existing runway. It also proposes changes to the RSA that would slightly expand its footprint. However, this extension would only minimally alter the existing drainage pattern on the project site, which is generally from paved areas to open ground. The project does not propose to expand the existing impervious surfaces on the project site, which consist of Runway 15-33 and associated taxiways. Therefore, the project would not generate additional runoff. The project would have no impact on drainage patterns or runoff.

c-iv) Flooding Hazards.

As noted, the project site is not within a flood hazard area designated by FEMA. The project would not change existing flood risks. The project would have no impact related to flooding hazards.

d) Release of Pollutants in Flood, Tsunami, or Seiche Zones.

As described in c-iv) above, the project site is not within a designated floodplain. The project is not near any large bodies of water, so it is not subject to seiches or tsunamis. The project would not introduce any large quantities of hazardous materials (see Section 3.9, Hazards and Hazardous Materials). The project would have no impact related to release of pollutants in flood, tsunami, or seiche zones.

e) Conflicts with Water Quality or Groundwater Management Plans.

As noted in a) above, the project would be subject to the City's MS4 Permit program, which is designed to minimize impacts on water quality. The project would be required to implement applicable controls from the West Placer County Storm Water Quality Design Manual, which was designed to ensure compliance with the MS4 Permit.

As noted in b) above, the project would not affect groundwater resources or supplies, so the project would not affect implementation of the Groundwater Sustainability Plan for the North American Subbasin nor hinder the attainment of its objectives. The plan proposes a

management action in which the participating Groundwater Sustainability Agencies would coordinate with land use planning agencies, so land use decisions do not impede the ability to sustainably manage the Subbasin. However, there are no permitting or regulatory processes required for this coordination, and this management action does not give the Groundwater Sustainability Agencies any decision-making authority on land use projects (GEI Consultants 2021). Project impacts related to water quality or groundwater management plans would be less than significant.

3.11 LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?				✓
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			✓	

NARRATIVE DISCUSSION

Environmental Setting

The project is in Lincoln Regional Airport. Chapter 1.0, Introduction, describes Lincoln Regional Airport and its facilities. The City has designated approximately 90 acres of airport property between Flightline Drive and Aviation Boulevard as the Lincoln Airport Business Park. The business park is owned by the City and includes commercial and business lots ranging in size from 0.5 to 2.6 acres (City of Lincoln 2007a). No construction work has occurred on this site to date.

Land uses in the City east of Aviation Boulevard are primarily light industrial business. These business parks are consistent with the City of Lincoln goals to encourage construction in the vicinity of the airport of uses compatible with aeronautics. Land uses south, north, and west of the airport are within the City's Sphere of Influence in unincorporated Placer County. These areas are generally rural residential and agriculture with scattered residences on minimum parcel sizes of 10 acres. Land uses within two miles of the airport are compatible with aircraft operations, and future uses are subject to review and approval by the Placer County Airport Land Use Commission (City of Lincoln 2007a).

The Lincoln Regional Airport Master Plan was adopted in 2008. The Airport Master Plan developed several general planning goals for the master planning effort. These planning goals relate to various aspects of the physical layout, capacity, operations, and development of Lincoln Regional Airport under development. The Airport Master Plan describes in detail historical and forecasted aircraft operations and identifies facilities and improvements necessary to meet future demands, along with the phasing and funding of these facilities and

improvements. Improvements to Runway 15-33 were among the identified improvements (City of Lincoln 2007b). An EIR was prepared and certified for the Airport Master Plan.

The State has enacted SB 525, which seeks to address the adverse environmental impacts of projects that disproportionately affect minority and/or lower income communities, particularly those already burdened with environmental problems. The California Office of Environmental Health Hazard Assessment has developed the California Communities Environmental Health Screening Tool (CalEnviroScreen) to identify "environmental justice" or "disadvantaged" communities. CalEnviroScreen measures pollution and population characteristics using 20 indicators such as air and drinking water quality, waste sites, toxic emissions, asthma rates, and poverty. It applies a formula to each U.S. Census tract in California to generate a score that rates the level of cumulative impacts on each area. A census tract that scores in the top 25% is considered a disadvantaged community. The project site is within Census Tract 6061023400. According to CalEnviroScreen, the overall score for this census tract is 22, which is not within the top 25% (75-100). Therefore, the project site is not within a disadvantaged community (OEHHA 2022).

Environmental Impacts and Mitigation Measures

a) Division of Established Community.

The project is on airport property. There are no established communities within Lincoln Regional Airport. The project would not divide an established community; therefore, it would have no impact on this issue.

b) Conflicts with Land Use Plans, Policies, and Regulations.

The project is the reconstruction of a runway with other minor improvements. This project is consistent with the Lincoln Regional Airport Master Plan, the primary land use plan guiding development at the airport. The EIR for the Airport Master Plan described environmental impacts that either were less than significant or would be less than significant with implementation of mitigation measures. As the project would be consistent with the scope of airport improvements evaluated by the Airport Master Plan, it would have no new or more severe environmental impacts that were analyzed in the Airport Master Plan EIR.

This IS/MND discusses potential impacts on the environment and prescribes mitigation of potentially significant environmental impacts. No impacts have been identified that cannot be mitigated to a level that would be less than significant. Also, this IS/MND has identified existing land use plans, policies, and ordinances potentially applicable to the project. These plans, policies, and ordinances either do not apply to the project, or the project would comply with them, thereby eliminating potential conflict.

As noted, the project is within a Census tract that is not classified as a disadvantaged community under SB 525. Therefore, the project would not conflict with State legislation intended to minimize environmental impacts on disadvantaged communities. Overall, project impacts related to land use plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect would be less than significant.

3.12 MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				✓
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				✓

NARRATIVE DISCUSSION

Environmental Setting

The airport is constructed on alluvium of the Riverbank Formation, which generally is composed of unconsolidated stream and basin clay to sand/gravel-sized deposits. These surface deposits are widespread throughout western Placer County and are not generally considered economically valuable deposits. The closest mining activities are the clay extraction pits about three miles east of the airport. These pits are associated with the Gladding-McBean operation. The only other mineral resource site in the vicinity of the project site is a sand and gravel operation southeast of the City. The project site is not located within a Mineral Resource Zone, as defined by the California Geological Survey (City of Lincoln 2007a). There are no oil or natural gas wells, active or inactive, in the Lincoln area (DOGGR 2022).

Environmental Impacts and Mitigation Measures

a, b) Availability of Mineral Resources.

As described above, there are no identified mineral resources areas nor active mining operations on or in the immediate vicinity of the project site. There are no oil or gas field in the area. Therefore, the project would not affect the availability of, or access to, any known or locally designated mineral resources. The project would have no impact on availability of mineral resources.

3.13 NOISE

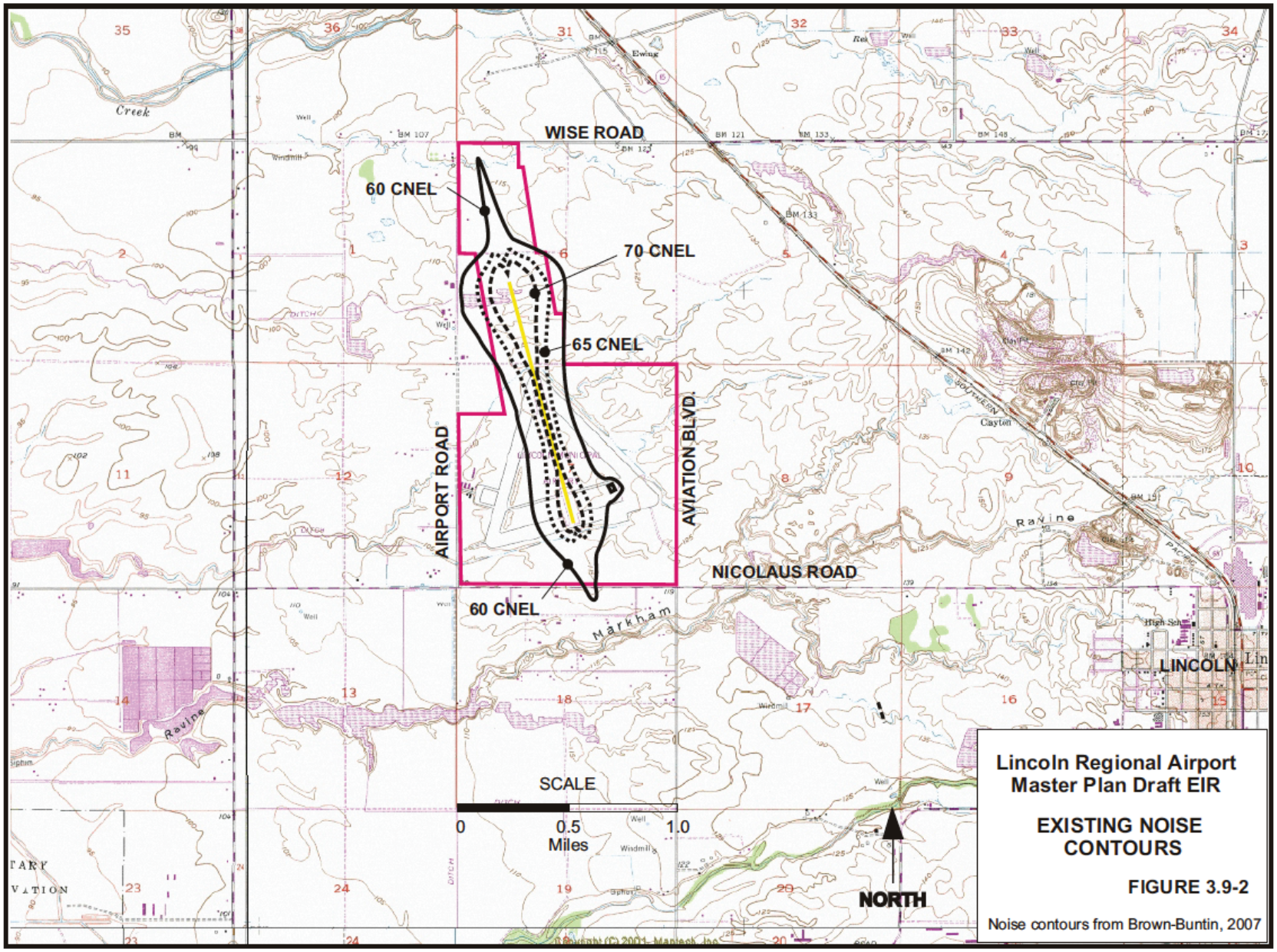
Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		✓		
b) Generation of excessive groundborne vibration or groundborne noise levels?				✓
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				✓

NARRATIVE DISCUSSION

Environmental Setting

Assessment of noise impacts focuses on project-related changes in the "ambient" noise level, which is the general noise level in a project area. The primary noise generators within the City consist of vehicular traffic along the SR 65 Bypass and local roadways, the Union Pacific Railroad line, and the Lincoln Regional Airport. Aircraft noise affecting the City is produced by operations at the existing Lincoln Regional Airport. The greatest potential for noise intrusion occurs when aircraft land, take off, or run their engines while on the ground. There are three primary sources of noise in a jet engine: the exhaust, the turbomachinery, and the fan. The noise associated with general aviation propeller aircraft is produced primarily by the propellers and secondarily from the engine and exhaust. (City of Lincoln 2008a).

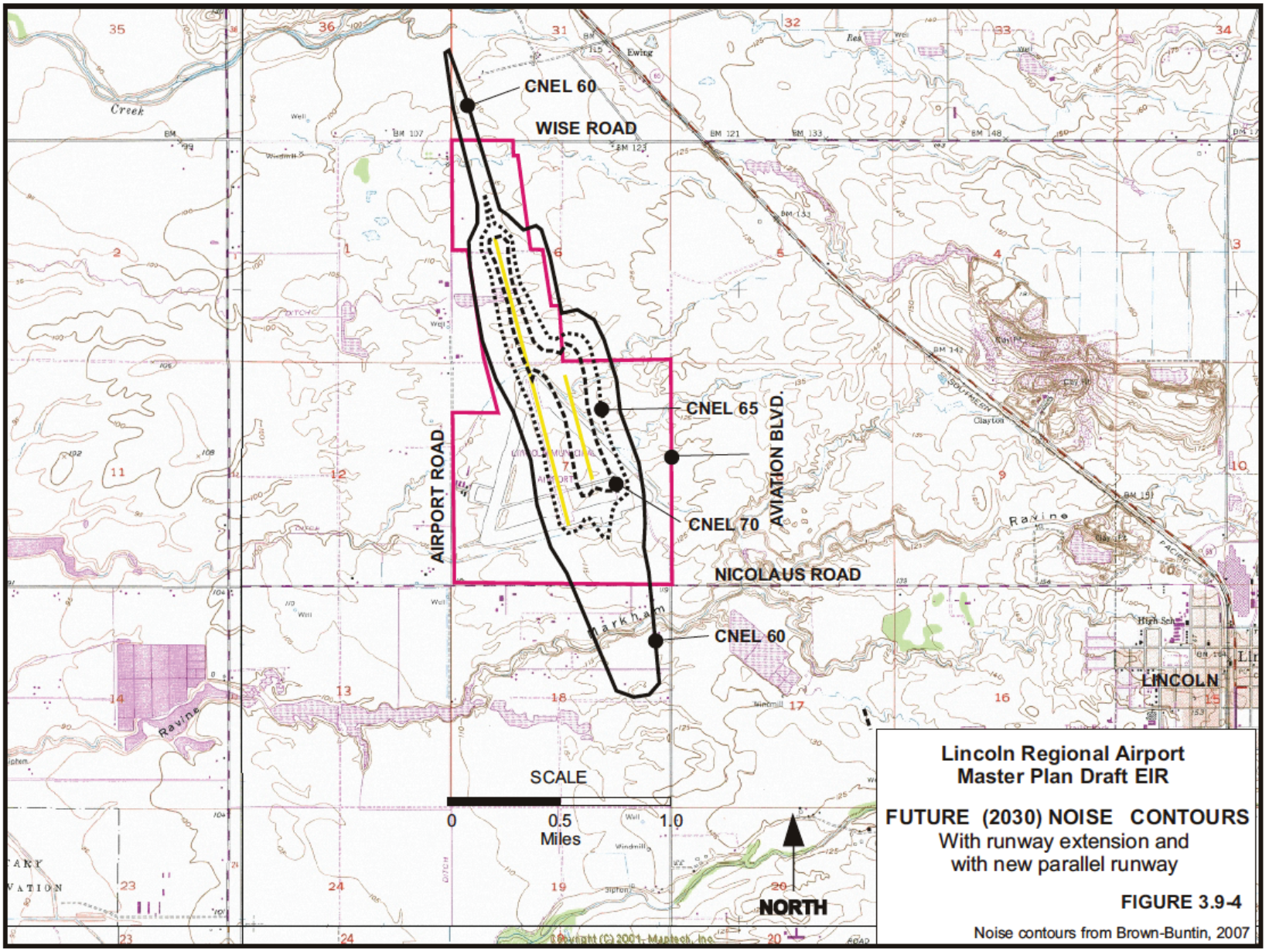
Airport noise contours for a base year of 2005 and the future year 2030 were prepared as part of the Lincoln Regional Airport Master Plan (City of Lincoln 2007b). These contours are identified in Figures 3-2 and 3-3. Under base year conditions, all the 65 CNEL contour and most of the 60 CNEL contour fall within the existing airport property boundary. The 60 CNEL contour extends slightly beyond the airport boundary to the south, along the extended runway center line. This affects approximately 3.5 acres of undeveloped land on the south side of Nicolaus Road. Under future conditions, aircraft noise levels would extend the 60 dBA CNEL contour over approximately 60 acres of rural and low-density residential areas south of Nicolaus Road. (City of Lincoln 2007a).



BaseCamp Environmental

SOURCE: City of Lincoln

Figure 3-2
AIRPORT NOISE CONTOURS-2005



BaseCamp Environmental

SOURCE: City of Lincoln

Figure 3-3
AIRPORT NOISE CONTOURS-2030

The main concern regarding noise impact is its impact on noise-sensitive land uses. Land uses considered sensitive to noise include low-density residential areas, schools, libraries, churches, hospitals, and parks. Noise levels of 60 A-weighted decibels (dBA) CNEL and below are considered "acceptable" for low-density residential areas, while 65 dBA CNEL and below is considered acceptable for the other land uses (City of Lincoln 2008a). The Community Noise Equivalent Level (CNEL) equates variable noise levels in the local environment to the same total sound energy being produced over a given period. Then a +10-dB weighting is applied to noise occurring between 10:00 p.m. and 7:00 a.m., and a +5-dB weighting is applied to noise occurring between 7:00 p.m. and 10:00 p.m., on the assumption that people are more sensitive to noise during those times.

Groundborne vibration is not a common environmental problem. It is typically associated with transportation facilities, although it is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Construction equipment is another potential source. Caltrans has prescribed a methodology for evaluating groundborne vibration impacts from construction related to potential damage to structures, based on transient sources such as blasting or continuous/frequent intermittent sources such as vibratory pile drivers and compaction equipment (Caltrans 2013). Measurements of groundborne vibrations are presented in peak particle velocity, with the unit of measure being inches per second.

Environmental Impacts and Mitigation Measures

a) Generation of Noise Exceeding Local Standards.

Noise from construction activities would be the primary noise of concern associated with the project. Table 3-3 shows noise levels that could be generated by construction equipment. The nearest noise-sensitive land uses are rural residences on the west side of Airport Way along the western boundary of the airport. The nearest residence to the project site is more than 1,500 feet away.

The noise level at a given distance from a source can be estimated using the Inverse Square Law of Noise Propagation, which states that noise decreases by 6 dBA with every doubling of distance from a source (Harris 1991). When this is applied to the noise level generated by a concrete saw, the loudest equipment listed in Table 3-5, it is estimated that the noise level at the nearest residence would be approximately 60 dB - the maximum outdoor noise level allowed by the Lincoln General Plan in residential areas without mitigation. Moreover, construction noise would be temporary and would cease when work is completed, which is estimated to be eight weeks from the start of construction. Nevertheless, given that exposure of residences to construction noise could reach the maximum allowable level, this impact is considered potentially significant.

The Airport Master Plan EIR analyzed construction noise impacts and determined that such impacts would be less than significant with implementation of mitigation measures. The project would be subject to the mitigation measures in that EIR. One of these measures is described below. With implementation of mitigation, project impacts on noise would be less than significant.

TABLE 3-3
CONSTRUCTION EQUIPMENT NOISE LEVELS

Type of Equipment	Maximum Level (dBA at 50 feet)
Auger Drill Rig	84
Backhoe	78
Compactor	83
Compressor (air)	78
Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Jackhammer	89
Paver	77
Pneumatic Tools	85

Source: FHWA 2006.

Noise from aircraft operations would be independent of the project. The project would not result in any change in the number or type of aircraft operating at the airport in runway geometry, or in approach and departure flight paths. As such, the project would not affect ambient noise levels at the airport during operations. In addition, the City has incorporated within its General Plan the Placer County Airport Land Use Compatibility Plan, which was prepared to promote compatibility between the airport and the surrounding land uses. Implementation of the Airport Land Use Compatibility Plan would minimize conflicts between airport operations and potentially sensitive land uses. Project impacts associated with operational noise would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

NOISE-1: In accordance with the Lincoln Regional Airport Master Plan EIR, certified in 2008, the following noise mitigation measures shall be implemented:

- Construction activities shall be prohibited between the hours of 6 p.m. Saturday and 6:30 a.m. Monday, 8 p.m. and 6:30 a.m. Monday through Thursday, 8 p.m. Friday and 9 a.m. Saturday, or anytime on City-observed holidays, unless the City Director of Public Works approves changes to these hours.

- The construction contractor shall employ noise-reducing construction practices such that City noise ordinance standards are

not exceeded, as approved by the City Director of Public Works. Measures to be used to limit noise may include, but are not limited to:

- Locating equipment as far as practical from noise-sensitive uses;
- Not using equipment that is louder than standard equipment;
- Selecting haul routes that affect the fewest number of people;
- Using noise-reducing enclosures around noise-generating equipment; and
- Constructing barriers between noise sources and noise-sensitive land uses to block sound transmission.

Significance After Mitigation: Less than significant

b) Exposure to Groundborne Vibrations.

The main source of groundborne vibration would be construction equipment. Project construction work would be confined to the runway area, and the nearest sensitive receptor is more than 1,500 feet away. It is unlikely that any groundborne vibration from construction work would be felt at that distance. After construction work is completed, no groundborne vibrations would be generated. The project would have no impact related to groundborne vibration.

c) Public Airport and Private Airstrip Noise.

The project is within Lincoln Regional Airport. As noted in Section 3.9, Hazards and Hazardous Materials, the project would not place any residents or occupants of structures on or near the project site. The project would have no impact related to airport or airstrip noise.

3.14 POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				✓
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				✓

NARRATIVE DISCUSSION

Environmental Setting

The 2020 U.S. Census indicates that the population of Lincoln is 49,757, an increase of approximately 16.2% from its 2010 U.S. Census population of 42,819. As of the 2020 U.S. Census, Lincoln had an estimated 19,480 housing units (U.S. Census Bureau 2020). Based on estimates from the California Department of Finance, single-family detached units – the typical house – accounted for approximately 90.4% of total housing units in Lincoln (California Department of Finance 2021).

Environmental Impacts and Mitigation Measures

a) Unplanned Population Growth.

The project proposes reconstruction of a runway and other improvements on airport property. It would not construct additional housing that would directly affect population. It also would not add infrastructure that could be used in future residential development; therefore, it would not indirectly encourage population growth. The project would have no impact related to unplanned population growth.

b) Displacement of Housing or People.

The project would occur within the existing airport, which contains no housing or residents. No housing or residents would be displaced by the project. The project would have no impact related to displacement.

3.15 PUBLIC SERVICES

Would the project:

a) Result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Fire protection?				✓
ii) Police protection?				✓
iii) Schools?				✓
iv) Parks?				✓
v) Other public facilities?				✓

NARRATIVE DISCUSSION

Environmental Setting

The City of Lincoln provides fire protection services through its Fire Department and police protection services through its Police Department. The City also provides park and recreational services through its Parks and Recreation Department. Educational services from transitional kindergarten to 12th grade are provided by the Western Placer Unified School District. Other public services include the Lincoln Public Library.

Environmental Impacts and Mitigation Measures

a-i) Fire Protection.

The project is the reconstruction of a runway and minor improvements. The improvements would not increase the risk of fire occurring on the project site. In fact, the improvements to the RSA may increase airport safety, which might reduce fire protection service. As noted in Section 3.14, Population and Housing, the project would not generate a population increase, which would lead to additional demand for fire protection service demand. The project would not require new or expanded fire protection facilities that could have environmental impacts. The project would have no impact on fire protection services.

a-ii) Police Protection.

The project would not generate a population increase, which would lead to additional demand for police protection services. The project would not require new or expanded police protection facilities that could have environmental impacts. The project would have no impact on police protection services.

a-iii) Schools.

As noted in Section 3.14, Population and Housing, the project would not construct residences, nor would it indirectly encourage population growth in the area. Because of this, the project would not create additional demand for school services. The project would not require new or expanded school facilities that could have environmental impacts. The project would have no impact on schools.

a-iv) Parks.

The project would not construct residences, nor would it indirectly encourage population growth in the area. Because of this, the project would not create additional demand for park services. The project would not require new or expanded park facilities that could have environmental impacts. The project would have no impact on parks.

a-v) Other Public Facilities.

The project would not construct residences, nor would it indirectly encourage population growth in the area. Because of this, the project would not create additional demand for other public services, such as library service. The project would not require new or expanded

facilities that could have environmental impacts. The project would have no impact on other public facilities.

3.16 RECREATION

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated?				✓
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?				✓

NARRATIVE DISCUSSION

Environmental Setting

As noted in Section 3.15, Public Services, the City of Lincoln provides parks and recreational facilities and services through its Parks and Recreation Department. The Department manages 18 parks, along with four rental facilities, the McBean Memorial Pool, and a system of open space and trails.

Environmental Impacts and Mitigation Measures

a, b) Recreational Facilities.

As noted in Section 3.14, Population and Housing, the project would not construct residences, nor would it indirectly encourage population growth in the area. Because of this, the project would not create additional demand for park and recreational services. The project would not require new or expanded recreational facilities that could have environmental impacts. The project would have no impact on recreational facilities.

3.17 TRANSPORTATION

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?			✓	

b) Conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?				✓
c) Substantially increase hazards to a geometric design feature (e g., sharp curves or dangerous intersections) or incompatible uses (e g, farm equipment)?				✓
d) Result in inadequate emergency access?				✓

NARRATIVE DISCUSSION

Environmental Setting

Motor vehicle access to Lincoln Regional Airport is provided by Flightline Drive east of the airport. Flightline Drive is a two-lane, north-south road that primarily serves traffic associated with airport operations and businesses. Flightline Drive dead-ends at its northern end; its southern end intersects with Aviation Boulevard.

As described in Chapter 1.0, Introduction, Lincoln Regional Airport is bordered by Nicolaus Road to the south, West Wise Road to the north, Airport Road to the west, and Aviation Boulevard to the east. Nicolaus Road is an east-west two-lane arterial roadway that extends from H Street just west of SR 65 and the UPRR tracks to the Sutter County line, where it becomes Marcum Road. West Wise Road is a two-lane, rural road in the County. Airport Road is a two-lane, rural road that serves the rural residences and businesses in the area.

Aviation Boulevard is a north-south, two-lane road that primarily serves the light industrial activities east of the airport. As noted, Flightline Drive intersects with Aviation Boulevard. South of Nicolaus Road, Aviation Boulevard becomes Nelson Lane, which connects to the SR 65 Bypass. Near the airport, the SR 65 Bypass is a four-lane expressway north of Nelson Lane and a four-lane freeway south of Nelson Lane. It connects Lincoln to Roseville and Interstate 80 to the south and to Wheatland and Marysville to the north.

Transit services in the City are provided by Placer County Transit. No bus routes serve the Lincoln Regional Airport. There are no designated bikeways in the vicinity of the airport. Sidewalks are limited to both sides of the segment of Flightline Drive adjacent to existing development in the eastern portion of the airport.

The State of California has recently added Section 15064.3 to the CEQA Guidelines, which is meant to incorporate SB 743 into CEQA analysis. SB 743 requires an alternative mechanism for evaluating transportation impacts and amending the CEQA guidelines to provide a transportation impact analysis framework that prioritizes reducing GHG emissions, replacing the prior focus of minimizing automobile delay. Section 15064.3(b) states that VMT is the preferred method for evaluating transportation impacts, rather than LOS. The VMT metric measures the total miles traveled by vehicles associated with a project. Unlike LOS, VMT accounts for the total environmental impacts of a project on transportation, including use of non-vehicle travel modes.

Environmental Impacts and Mitigation Measures

a) Conflicts with Transportation Programs and Plans.

The project is the reconstruction of a runway and other minor improvements. It would have no impact on local roadways, nor would it affect services or facilities promoting alternative transportation, such as bicycle lanes and bus service. The project is designed to improve facilities used by aircraft and associated service vehicles, which is consistent with the objectives and proposed projects of the Lincoln Regional Airport Master Plan. As the project would not affect roadways or other transportation facilities beyond airport property, it would not conflict with other transportations programs or plans. Project impacts related to transportation programs and plans would be less than significant.

b) Conflict with CEQA Guidelines Section 15064.3(b).

Section 15064.3(b) states that VMT is the preferred method for evaluating transportation impacts, rather than the commonly used LOS. As the project is the reconstruction of a runway, it would not generate any new on-road vehicle traffic; therefore, it would not affect VMT. Traffic to and from the airport is related to the number of aircraft operations that would occur. However, changes in aircraft operations and public road traffic would occur independent of the proposed improvements. The project would have no impact related to CEQA Guidelines Section 15064.3(b).

c) Traffic Hazards.

Project construction would involve movement of construction equipment onto and from the site, which would be different in character from existing traffic in the vicinity. Construction traffic may hinder public road traffic, but any such effect would be temporary and would cease when work is completed, approximately two months after start of work. As noted in a) above, the project would not affect any roadways and therefore would not contribute to potential traffic hazards. The project would have no impact related to traffic safety.

d) Emergency Access.

The project site would continue to be accessible by existing taxiways to Runway 15-33. These taxiways would provide adequate access for emergency vehicles. The project would have no impact on emergency access.

3.18 TRIBAL CULTURAL RESOURCES

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
	✓		
	✓		

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

NARRATIVE DISCUSSION

Environmental Setting

The project site is in the ethnographic territory of the Nisenan tribe, also known as the Southern Maidu. Prior to European-American contact, Nisenan territory included the southern extent of the Sacramento Valley, east of the Sacramento River between the North Fork of the Yuba River and the Cosumnes River on the north and south, respectively, and extended east into the foothills of the Sierra Nevada. The Nisenan established central villages and smaller satellite villages along the main watercourses in their territories. Valley Nisenan villages were generally on low, natural rises along streams and rivers or on gentle, south-facing slopes, and Hill Nisenan villages were on ridges and large flats along major streams. Village population varied and is reported as ranging from 15 to over 500 individuals. Traditional village structures included semi-subterranean or aboveground conical, circular, or dome-shaped houses, as well as acorn granaries, winter grinding houses, ceremonial or dance houses, and sweathouses (Natural Investigations Company 2021).

Like the majority of Native Californians, the Nisenan relied on acorns as a staple food, which were collected in the fall and then stored in granaries. Game birds, waterfowl, and fish, particularly salmon, were also important components of the Nisenan diet. In addition to acorns, plant resources included pine nuts, buckeye nuts, hazelnuts, fruits, berries, seeds, and underground tubers. Similar to other California Native American groups, the Nisenan employed a variety of tools, implements, and enclosures for hunting and collecting natural resources, including the bow and arrow; canoes from tule, balsa, or logs; bedrock mortars

and cobblestone pestles; and a variety of woven tools and baskets. (Natural Investigations Company 2021).

The traditional culture and lifeways of the Nisenan who inhabited the fertile plains between Sacramento and the Sierra foothills, were disrupted beginning in the early 1800s. During the Mexican period, native peoples were affected by land grant settlements and decimated by foreign disease epidemics that swept through the densely populated Central Valley. An epidemic that swept the Sacramento Valley in 1833 caused the death of an estimated 75 percent of the Valley Nisenan. The discovery of gold in 1848 at Sutter's Mill had a devastating impact on the remaining Nisenan. Surviving Nisenan retreated to the foothills and mountains or labored for the growing ranching, farming, and mining industries. Nisenan descendants reside on the Auburn, Berry Creek, Chico, Enterprise, Greenville, Mooretown, Shingle Springs, and Susanville rancherias, as well as on the Round Valley Reservation (Natural Investigations Company 2021).

In 2014, the California Legislature enacted AB 52. AB 52 modifies CEQA procedures regarding consultation with Native American tribes on cultural resource issues. AB 52 established a category called "tribal cultural resources," which not only includes physical resources but also site features, places, cultural landscapes, and sacred places and objects of value to a tribe, and which are on or eligible for a State or local historic register. AB 52 establishes notification requirements and consultation procedures between a CEQA lead agency and a tribe when a tribal cultural resource is involved.

Environmental Impacts and Mitigation Measures

a, b) Tribal Cultural Resources.

As part of preparation of its Cultural Resources Inventory for the project, available in Appendix C of this IS/MND, Natural Investigations Company contacted the Native American Heritage Commission to request a search of its Sacred Lands File for traditional cultural resources within or near the project site. The results of the search were negative for Native American cultural resources in the project vicinity.

The Commission provided a list of four tribes geographically affiliated with the project site and recommended that they be contacted for additional information on the potential for Native American resources in Project vicinity. All four tribes were contacted, with representatives from two tribes responding: the Colfax-Todds Valley Consolidated Tribe and the United Auburn Indian Community (Natural Investigations Company 2021). The Colfax-Todds Valley Consolidated Tribe requested information on the drainages bisecting the project site and on the extent of past ground-disturbance in these drainage areas. This information was provided (Natural Investigations Company 2021).

The United Auburn Indian Community requested to be informed of any cultural resource discoveries made during the field visit for the project. The tribe also provided the lead agency with mitigation for tribal cultural resources for incorporation into their compliance document (Natural Investigations Company 2021). The mitigation is described in Appendix A of the Cultural Resources Inventory and is incorporated within this document as a mitigation measure below. Implementation of the mitigation measure below, along with implementation

of Mitigation Measure CULT-1 and California Health and Safety Code Section 7050.5 for any encountered burials - both of which are described in Section 3.5, Cultural Resources - would minimize impacts on tribal cultural resources encountered during construction to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

TCR-1: If any possible tribal cultural resources are discovered during ground disturbing construction activities, all work shall cease within 100 feet of the find. A Tribal Representative from a California Native American tribe that is traditionally and culturally affiliated with a geographic area shall be immediately notified and shall determine if the find is a tribal cultural resource. The Tribal Representative will make recommendations for further evaluation and treatment as necessary. Preservation in place is the preferred alternative; however, other culturally appropriate treatment may be implemented. Culturally appropriate treatment may be, but is not limited to, processing materials for reburial, minimizing handling of cultural objects, leaving objects in place within the landscape, returning objects to a location within the project area where they will not be subject to future impacts. Materials shall not be permanently curated unless approved by the Tribal Representative.

The contractor shall implement any measures deemed by the City to be necessary and feasible to preserve in place, avoid, or minimize impacts to the resource, including, but not limited to, facilitating the appropriate tribal treatment of the find, as necessary. Treatment that preserves or restores the cultural character and integrity of a tribal cultural resource may include tribal monitoring, culturally appropriate recovery of cultural objects, and reburial of cultural objects or cultural soil. Work at the discovery location cannot resume until all necessary investigation and evaluation of the discovery under the requirements of CEQA, including AB 52, have been satisfied.

Significance After Mitigation: Less than significant

3.19 UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications				✓

facilities, the construction or relocation of which could cause significant environmental effects?				
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?				✓
c) Result in a determination by the wastewater treatment provider that would serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				✓
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?				✓
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				✓

NARRATIVE DISCUSSION

Environmental Setting

The City of Lincoln provides water and wastewater services to the Lincoln Regional Airport. The City purchases treated water from the Placer County Water Agency and pumps groundwater from local wells for its water supply, including two wells on the airport property (see Section 3.10, Hydrology and Water Quality). The City owns and operates the Lincoln Wastewater Treatment and Reclamation Facility, which treats collected wastewater and produces recycled water for agricultural use at reclamation areas outside the existing City limits and for irrigation and industrial use within the City limits (City of Lincoln 2021).

The City also provides solid waste collection services. Collected solid waste is delivered to the Western Regional Sanitary Landfill, located at the southwest corner of Athens Road and Fiddyment Road approximately 4.25 miles south of the airport. The landfill is owned by the Western Placer Waste Management Authority, which is comprised of Placer County and the Cities of Roseville, Rocklin, and Lincoln (City of Lincoln 2006).

As noted in Section 3.10, Hydrology and Water Quality, storm drainage at the airport is conveyed to several streams in the vicinity. Electrical and natural gas services are provided to Lincoln by the Pacific Gas and Electric Company (PG&E). Telecommunications service is provided by several utilities. All these services have facilities in Lincoln that can be extended to serve residences and businesses as required.

Environmental Impacts and Mitigation Measures

a) Relocation or Construction of Utility Facilities.

The proposed project would not require the replacement or relocation of utility lines. Only specific navigational aids would be relocated or replaced. The project would not use water,

wastewater, or storm drainage services, so no new lines would be required. Existing electrical and communication lines are available at the airport. The project would have no impact related to relocation or construction of utility facilities.

b) Water Supplies.

The project would not require the use of water; therefore, it would not place any demands on the City's water. As such, the project would not require new water supplies. The project would have no impact on water supplies.

c) Wastewater Treatment Capacity.

The project would not generate any wastewater. The project would not require expansion of capacity of the City's wastewater treatment plant to accommodate the wastewater generated by the project. The project would have no impact on wastewater treatment capacity.

d, e) Solid Waste Services.

The project would generate solid waste only as part of project construction. Construction waste would be disposed of in compliance with the provisions of the adopted California Green Building Code that address construction waste. Upon completion, the project would not place any demands on solid waste collection services nor on the capacity of the landfill where the City's solid waste is disposed. The project would have no impact on solid waste services or regulations pertaining to solid waste.

3.20 WILDFIRE

If located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				✓
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				✓
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				✓
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				✓

NARRATIVE DISCUSSION

Environmental Setting

The proposed project is within the property of the Lincoln Regional Airport. The airport is substantially developed with aviation facilities, including Runway 15-33 and taxiways. Open space areas are located around Runway 15-33, but these areas are periodically maintained and mowed by the airport for fire prevention purposes.

The California Department of Forestry and Fire Protection (Cal Fire) has a Fire and Resource Assessment Program that identifies fire threat based on a combination of two factors: 1) fire frequency, or the likelihood of a given area burning, and 2) potential fire behavior. These two factors are combined in determining the following Fire Hazard Severity Zones: Moderate, High, Very High, Extreme. These zones apply to areas designated as State Responsibility Areas – areas in which the State has primary firefighting responsibility. The project site is not within a State Responsibility Area; rather, it is within a Local Responsibility Area, where local fire districts or departments have primary firefighting responsibility. The project site and vicinity are not in any designated fire hazard zone for a Local Responsibility Area (Cal Fire 2007, 2008).

Environmental Impacts and Mitigation Measures

a) Emergency Response Plans and Emergency Evacuation Plans.

The project site is not part of a State Responsibility Area, and Cal Fire maps indicate the site is not designated within any Fire Hazard Severity Zone. The project is within a mostly developed area. As noted in Section 3.9, Hazards and Hazardous Materials, the project would not affect any emergency response plans or emergency evacuation plans. The project would have no impact on this issue.

b) Exposure of Project Occupants to Wildfire Hazards.

As noted, Cal Fire maps indicate that the project site is not designated within a Fire Hazard Severity Zone. The project is the reconstruction of an existing runway and other improvements. The project site would not be occupied; therefore, it would not expose anyone to fire hazards. The project would have no impact related to exposure of project occupants to wildfire hazards.

c) Installation and Maintenance of Infrastructure.

As noted in Section 3.19, Utilities and Service System, no new utility lines would be extended to the project site. As such, there would be no increase in fire risk from this source. The project would have no impact related to infrastructural exacerbation of wildfire hazards.

d) Risks from Runoff, Post-Fire Slope Instability, or Drainage Changes.

As noted in b) above, no people or structures that would be occupied by people would be exposed to significant risks from changes resulting from fires in steeper areas, including

downslope or downstream flooding or landslides. The project would have no impact related to risks from runoff, post-fire slope instability, or drainage changes.

3.21 MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		✓		
b) Does the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			✓	
c) Does the project have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly?			✓	

NARRATIVE DISCUSSION

a) Findings on Biological and Cultural Resources.

The biological resource impacts of the revised project were described in Section 3.4, Biological Resources. Cultural resource impacts were described in Section 3.5, Cultural Resources, and Section 3.18, Tribal Cultural Resources. Potentially significant effects on biological and cultural resources were identified; however, mitigation measures would reduce these potentially significant impacts to a level that would be less than significant.

b) Findings on Cumulatively Considerable Impacts.

CEQA Guidelines Section 15130(a)(1) states that a “cumulative impact” is created by the combination of a proposed project with other past, present, and probable future projects or programs causing related impacts. Cumulative impacts can also result from individually minor, but collectively significant, projects taking place over time (CEQA Guidelines Section 15355[b]).

The proposed project is consistent with projects proposed in the Lincoln Regional Airport Master Plan. The Airport Master Plan EIR analyzed the potential cumulative impacts of airport development under the plan. It specifically analyzed the potential cumulative impacts on air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, public services and housing, and transportation and traffic. For all these issues, the Airport Master Plan EIR did not identify any impacts that were cumulatively considerable.

As described in this IS/MND, the project either would have no potential environmental impacts of the project or would have impacts that are less than significant. Where the project involves potentially significant impacts, these impacts would be avoided or reduced to a level that is less than significant with proposed mitigation measures and/or compliance with applicable regulations and conditions of required permits. Overall, the project would not make a considerable contribution to any potential cumulative impacts.

c) Findings on Adverse Effects on Human Beings.

Potential adverse project effects on human beings were discussed in Section 3.3, Air Quality; Section 3.7, Geology and Soils (seismic hazards); Section 3.9, Hazards and Hazardous Materials; Section 3.10, Hydrology and Water Quality (flooding); Section 3.17, Transportation (traffic hazards); and Section 3.20, Wildfire. In general, the project would have no adverse effects on human beings. Potential adverse effects identified in the aforementioned sections would be reduced to levels considered less than significant through compliance with applicable laws, regulations, and City ordinances and standards, along with mitigation measures where necessary.

4.0 REFERENCES

4.1 DOCUMENT PREPARERS

This IS/MND was prepared by BaseCamp Environmental, Inc. for use by and under the supervision of the City of Lincoln. The following persons were involved in preparation of the IS/MND:

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4.3 PERSONS CONSULTED

Jim Wallace. President, Wallace Environmental Consulting, Inc.

5.0 NOTES RELATED TO EVALUATION OF ENVIRONMENTAL IMPACTS

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less-than-significant level. Mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced.

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration [CEQA Guidelines Section 15063(c)(3)(D)]. In this case, a brief discussion should identify the following:

    a) Earlier Analysis Used: Identify and state where they are available for review.

    b) Impacts Adequately Addressed: Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

    c) Mitigation Measures: For effects that are "Less than Significant with Mitigation Incorporated," describe the mitigation measures, which ones were incorporated or refined from the earlier document, and the extent to which

they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and

   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

APPENDIX A
AIR QUALITY MODELING RESULTS

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for -> Lincoln Airport

Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	0.68	6.19	7.09	8.61	0.31	8.30	2.00	0.27	1.73	0.02	1,608.85	0.41	0.04	1,631.15
Grading/Excavation	4.08	38.56	49.95	10.33	2.03	8.30	3.41	1.69	1.73	0.13	12,700.84	2.46	0.81	13,002.51
Drainage/Utilities/Sub-Grade	3.40	32.35	33.64	9.74	1.44	8.30	3.04	1.32	1.73	0.07	6,807.49	1.55	0.09	6,872.95
Paving	1.34	17.94	22.57	0.98	0.98	0.00	0.72	0.72	0.00	0.08	7,760.50	0.73	0.84	8,030.00
Maximum (pounds/day)	4.08	38.56	49.95	10.33	2.03	8.30	3.41	1.69	1.73	0.13	12,700.84	2.46	0.84	13,002.51
Total (tons/construction project)	0.09	0.90	1.08	0.26	0.04	0.21	0.08	0.04	0.04	0.00	263.64	0.05	0.01	269.22

Notes:

Project Start Year ->	2023
Project Length (months) ->	2
Total Project Area (acres) ->	50
Maximum Area Disturbed/Day (acres) ->	1
Water Truck Used? ->	Yes

	Total Material Imported/Exported Volume (yd^3/day)		Daily VMT (miles/day)			
Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	280	40
Grading/Excavation	771	0	1,170	0	760	40
Drainage/Utilities/Sub-Grade	0	0	0	0	680	40
Paving	0	872	0	1,320	520	40

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Lincoln Airport

Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.00	0.02	0.02	0.03	0.00	0.02	0.01	0.00	0.01	0.00	4.83	0.00	0.00	4.44
Grading/Excavation	0.05	0.46	0.60	0.12	0.02	0.10	0.04	0.02	0.02	0.00	152.41	0.03	0.01	141.55
Drainage/Utilities/Sub-Grade	0.04	0.34	0.35	0.10	0.02	0.09	0.03	0.01	0.02	0.00	71.48	0.02	0.00	65.47
Paving	0.01	0.08	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	34.92	0.00	0.00	32.78
Maximum (tons/phase)	0.05	0.46	0.60	0.12	0.02	0.10	0.04	0.02	0.02	0.00	152.41	0.03	0.01	141.55
Total (tons/construction project)	0.09	0.90	1.08	0.26	0.04	0.21	0.08	0.04	0.04	0.00	263.64	0.05	0.01	244.24

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

Road Construction Emissions Model **Version 9.0.0**
Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells D10 through D24, E28 through G35, and D38 through D41 for all project types.
Please use "Clear Data Input & User Overrides" button first before changing the Project Type or begin a new project.

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Input Type

Project Name	Lincoln Airport	
Construction Start Year	2023	Enter a Year between 2014 and 2040 (inclusive)
Project Type	1	1) New Road Construction : Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway 2) Road Widening : Project to add a new lane to an existing roadway 3) Bridge/Overpass Construction : Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane 4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee construction
Project Construction Time	2.00	months
Working Days per Month	30.00	days (assume 22 if unknown)
Predominant Soil/Site Type: Enter 1, 2, or 3 (for project within "Sacramento County", follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)	1	1) Sand Gravel : Use for quaternary deposits (Delta/West County) 2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the lone formation (Scott Road, Rancho Murieta) 3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)
Project Length	1.40	miles
Total Project Area	50.00	acres
Maximum Area Disturbed/Day	0.83	acres
Water Trucks Used?	1	1. Yes 2. No

Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County.

http://www.conservation.ca.gov/cgs/information/geologic_mapping/Pages/googlemaps.aspx#regionalseries

Material Hauling Quantity Input

Material Type	Phase	Haul Truck Capacity (yd^3) (assume 20 if unknown)	Import Volume (yd^3/day)	Export Volume (yd^3/day)
Soil	Grubbing/Land Clearing			
	Grading/Excavation	20.00	583.00	187.50
	Drainage/Utilities/Sub-Grade			
	Paving			
Asphalt	Grubbing/Land Clearing			
	Grading/Excavation			
	Drainage/Utilities/Sub-Grade			
	Paving	20.00	455.00	416.66

Mitigation Options

On-road Fleet Emissions Mitigation	No Mitigation	Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer
Off-road Equipment Emissions Mitigation	No Mitigation	Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure (http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/Mitigation). Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standard

The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.

Note: The program's estimates of construction period phase length can be overridden in cells D50 through D53, and F50 through F53.

Construction Periods	User Override of Construction Months	Program Calculated Months	User Override of Phase Starting Date	Program Default Phase Starting Date
Grubbing/Land Clearing		0.20		1/1/2023
Grading/Excavation		0.80		1/8/2023
Drainage/Utilities/Sub-Grade		0.70		2/2/2023
Paving		0.30		2/24/2023
Totals (Months)	2			

Note: Soil Hauling emission default values can be overridden in cells D61 through D64, and F61 through F64.

Soil Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing		30.00		0	0.00
Miles/round trip: Grading/Excavation		30.00		39	1170.00
Miles/round trip: Drainage/Utilities/Sub-Grade		30.00		0	0.00
Miles/round trip: Paving		30.00		0	0.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.04	0.43	3.54	0.12	0.05	0.02	1,726.74	0.00	0.27	1,807.67
Grading/Excavation (grams/mile)	0.04	0.43	3.54	0.12	0.05	0.02	1,726.74	0.00	0.27	1,807.67
Draining/Utilities/Sub-Grade (grams/mile)	0.04	0.43	3.54	0.12	0.05	0.02	1,726.74	0.00	0.27	1,807.67
Paving (grams/mile)	0.04	0.43	3.54	0.12	0.05	0.02	1,726.74	0.00	0.27	1,807.67
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.11	1.10	9.50	0.30	0.14	0.04	4,453.97	0.01	0.70	4,662.73
Tons per const. Period - Grading/Excavation	0.00	0.01	0.11	0.00	0.00	0.00	53.45	0.00	0.01	55.95
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.01	0.11	0.00	0.00	0.00	53.45	0.00	0.01	55.95

Note: Asphalt Hauling emission default values can be overridden in cells D91 through D94, and F91 through F94.

Asphalt Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing		30.00		0	0.00
Miles/round trip: Grading/Excavation		30.00		0	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade		30.00		0	0.00
Miles/round trip: Paving		30.00		44	1320.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.04	0.43	3.54	0.12	0.05	0.02	1,726.74	0.00	0.27	1,807.67
Grading/Excavation (grams/mile)	0.04	0.43	3.54	0.12	0.05	0.02	1,726.74	0.00	0.27	1,807.67
Draining/Utilities/Sub-Grade (grams/mile)	0.04	0.43	3.54	0.12	0.05	0.02	1,726.74	0.00	0.27	1,807.67
Paving (grams/mile)	0.04	0.43	3.54	0.12	0.05	0.02	1,726.74	0.00	0.27	1,807.67
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.13	1.24	10.72	0.34	0.15	0.05	5,024.99	0.01	0.79	5,260.52
Tons per const. Period - Paving	0.00	0.01	0.05	0.00	0.00	0.00	22.61	0.00	0.00	23.67
Total tons per construction project	0.00	0.01	0.05	0.00	0.00	0.00	22.61	0.00	0.00	23.67

Note: Worker commute default values can be overridden in cells D121 through D126.

Worker Commute Emissions	User Override of Worker Commute Default Values	Default Values		
User Input				
Miles/ one-way trip		20		
One-way trips/day		2	Calculated Daily Trips	Calculated Daily VMT
No. of employees: Grubbing/Land Clearing		7	14	280.00
No. of employees: Grading/Excavation		19	38	760.00
No. of employees: Drainage/Utilities/Sub-Grade		17	34	680.00
No. of employees: Paving		13	26	520.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Grading/Excavation (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Draining/Utilities/Sub-Grade (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Paving (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Grubbing/Land Clearing (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Grading/Excavation (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Draining/Utilities/Sub-Grade (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Paving (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.04	0.65	0.05	0.03	0.01	0.00	198.20	0.00	0.00	199.79
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.00	0.00	0.60
Pounds per day - Grading/Excavation	0.11	1.76	0.15	0.08	0.03	0.01	537.96	0.01	0.01	542.29
Tons per const. Period - Grading/Excavation	0.00	0.02	0.00	0.00	0.00	0.00	6.46	0.00	0.00	6.51
Pounds per day - Drainage/Utilities/Sub-Grade	0.10	1.57	0.13	0.07	0.03	0.00	481.33	0.01	0.01	485.21
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.02	0.00	0.00	0.00	0.00	5.05	0.00	0.00	5.09
Pounds per day - Paving	0.08	1.20	0.10	0.05	0.02	0.00	368.08	0.01	0.01	371.04
Tons per const. Period - Paving	0.00	0.01	0.00	0.00	0.00	0.00	1.66	0.00	0.00	1.67
Total tons per construction project	0.00	0.05	0.00	0.00	0.00	0.00	13.76	0.00	0.00	13.87

Note: Water Truck default values can be overridden in cells D153 through D156, I153 through I156, and F153 through F156.

Water Truck Emissions	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Round Trips/Vehicle/Day	Default Values Round Trips/Vehicle/Day	Calculated Trips/day	User Override of Miles/Round Trip	Default Values Miles/Round Trip	Calculated Daily VMT
User Input								
Grubbing/Land Clearing - Exhaust		1		5	5		8.00	40.00
Grading/Excavation - Exhaust		1		5	5		8.00	40.00
Drainage/Utilities/Subgrade		1		5	5		8.00	40.00
Paving		1		5	5		8.00	40.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.04	0.43	3.54	0.12	0.05	0.02	1,726.74	0.00	0.27	1,807.67
Grading/Excavation (grams/mile)	0.04	0.43	3.54	0.12	0.05	0.02	1,726.74	0.00	0.27	1,807.67
Draining/Utilities/Sub-Grade (grams/mile)	0.04	0.43	3.54	0.12	0.05	0.02	1,726.74	0.00	0.27	1,807.67
Paving (grams/mile)	0.04	0.43	3.54	0.12	0.05	0.02	1,726.74	0.00	0.27	1,807.67
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.04	0.36	0.01	0.00	0.00	152.27	0.00	0.02	159.41
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.48
Pounds per day - Grading/Excavation	0.00	0.04	0.36	0.01	0.00	0.00	152.27	0.00	0.02	159.41
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	1.83	0.00	0.00	1.91
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.04	0.36	0.01	0.00	0.00	152.27	0.00	0.02	159.41
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	1.60	0.00	0.00	1.67
Pounds per day - Paving	0.00	0.04	0.36	0.01	0.00	0.00	152.27	0.00	0.02	159.41
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.00	0.00	0.72
Total tons per construction project	0.00	0.00	0.01	0.00	0.00	0.00	4.57	0.00	0.00	4.78

Note: Fugitive dust default values can be overridden in cells D183 through D185.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing		0.83	8.30	0.02	1.73	0.01
Fugitive Dust - Grading/Excavation		0.83	8.30	0.10	1.73	0.02
Fugitive Dust - Drainage/Utilities/Subgrade		0.83	8.30	0.09	1.73	0.02

Off-Road Equipment Emissions

Grubbing/Land Clearing	Default Number of Vehicles	Mitigation Option Override of	Default		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Override of Default Number of Vehicles	*Program-estimate*	Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Crawler Tractors	0.44	2.24	5.12	0.20	0.18	0.01	758.27	0.25	0.01	766.45
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Excavators	0.19	3.26	1.55	0.08	0.07	0.01	500.11	0.16	0.00	505.50
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3		Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
				pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing	pounds per day	0.63	5.50	6.67	0.27	0.25	0.01	1,258.38	0.41	0.01	1,271.95
Grubbing/Land Clearing	tons per phase	0.00	0.02	0.02	0.00	0.00	0.00	3.78	0.00	0.00	3.82

Grading/Excavation Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Crawler Tractors	0.44	2.24	5.12	0.20	0.18	0.01	758.27	0.25	0.01	766.45
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3		Model Default Tier	Excavators	0.57	9.77	4.65	0.23	0.21	0.02	1,500.32	0.49	0.01	1,516.49
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Graders	0.38	1.69	4.65	0.15	0.14	0.01	640.86	0.21	0.01	647.76
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Rollers	0.31	3.70	3.22	0.18	0.16	0.01	508.22	0.16	0.00	513.69
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Rubber Tired Loaders	0.27	1.51	2.65	0.09	0.08	0.01	605.56	0.20	0.01	612.10
	2		Model Default Tier	Scrapers	1.57	12.27	16.57	0.65	0.60	0.03	2,940.26	0.95	0.03	2,971.94
0.00	3		Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Tractors/Loaders/Backhoes	0.30	4.46	3.07	0.15	0.14	0.01	603.15	0.20	0.01	609.64
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grading/Excavation	pounds per day	3.85	35.66	39.94	1.64	1.51	0.08	7,556.64	2.44	0.07	7,638.08
Grading/Excavation	tons per phase	0.05	0.43	0.48	0.02	0.02	0.00	90.68	0.03	0.00	91.66

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Air Compressors	0.26	2.41	1.74	0.09	0.09	0.00	375.26	0.02	0.00	376.67
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Generator Sets	0.31	3.67	2.72	0.13	0.13	0.01	623.04	0.03	0.00	625.12
	1		Model Default Tier	Graders	0.38	1.69	4.65	0.15	0.14	0.01	640.86	0.21	0.01	647.76
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Plate Compactors	0.04	0.21	0.25	0.01	0.01	0.00	34.48	0.00	0.00	34.65
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Pumps	0.33	3.73	2.75	0.13	0.13	0.01	623.04	0.03	0.00	625.14
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Rough Terrain Forklifts	0.11	2.29	1.40	0.04	0.04	0.00	333.80	0.11	0.00	337.40
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Scrapers	1.57	12.27	16.57	0.65	0.60	0.03	2,940.26	0.95	0.03	2,971.94
0.00	3		Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Tractors/Loaders/Backhoes	0.30	4.46	3.07	0.15	0.14	0.01	603.15	0.20	0.01	609.64
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment

If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Drainage/Utilities/Sub-Grade	pounds per day	3.29	30.74	33.15	1.36	1.28	0.06	6,173.89	1.54	0.05	6,228.33
Drainage/Utilities/Sub-Grade	tons per phase	0.03	0.32	0.35	0.01	0.01	0.00	64.83	0.02	0.00	65.40

Paving	Default Number of Vehicles	Mitigation Option Override of	Default		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Override of Default Number of Vehicles	*Program-estimate*	Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Equipment Tier	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipn	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Pavers	0.19	2.88	1.88	0.09	0.08	0.00	455.22	0.15	0.00	460.13
	1		Model Default Tier	Paving Equipment	0.17	2.56	1.60	0.08	0.07	0.00	394.47	0.13	0.00	398.72
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3		Model Default Tier	Rollers	0.46	5.56	4.83	0.27	0.24	0.01	762.32	0.25	0.01	770.54
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	3		Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Tractors/Loaders/Backhoes	0.30	4.46	3.07	0.15	0.14	0.01	603.15	0.20	0.01	609.64
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
				pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving		pounds per day		1.13	15.46	11.39	0.58	0.54	0.02	2,215.16	0.72	0.02	2,239.03
Paving		tons per phase		0.01	0.07	0.05	0.00	0.00	0.00	9.97	0.00	0.00	10.08
Total Emissions all Phases (tons per construction period) =>				0.09	0.84	0.90	0.04	0.03	0.00	169.25	0.05	0.00	170.95

Equipment default values for horsepower and hours/day can be overridden in cells D403 through D436 and F403 through F436.

Equipment	User Override of Horsepower	Default Values Horsepower	User Override of Hours/day	Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		78		8
Bore/Drill Rigs		221		8
Cement and Mortar Mixers		9		8
Concrete/Industrial Saws		81		8
Cranes		231		8
Crawler Tractors		212		8
Crushing/Proc. Equipment		85		8
Excavators		158		8
Forklifts		89		8
Generator Sets		84		8
Graders		187		8
Off-Highway Tractors		124		8
Off-Highway Trucks		402		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		168		8
Pavers		130		8
Paving Equipment		132		8
Plate Compactors		8		8
Pressure Washers		13		8
Pumps		84		8
Rollers		80		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		247		8
Rubber Tired Loaders		203		8
Scrapers		367		8
Signal Boards		6		8
Skid Steer Loaders		65		8
Surfacing Equipment		263		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		97		8
Trenchers		78		8
Welders		46		8

END OF DATA ENTRY SHEET

APPENDIX B
BIOLOGICAL RESOURCE REPORTS

AQUATIC RESOURCES DELINEATION FOR THE ±60-ACRE LINCOLN REGIONAL AIRPORT RUNWAY RECONSTRUCTION STUDY AREA

CITY OF LINCOLN, PLACER COUNTY, CALIFORNIA

Prepared for:
Wallace Environmental Consulting
P.O. Box 266
Courtland, CA 95615

Prepared by:
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Auburn, California 95603
(530) 888-0130

JULY 2021

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FIGURES

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APPENDICES

AQUATIC RESOURCES DELINEATION FOR THE ±60-ACRE LINCOLN REGIONAL AIRPORT RUNWAY RECONSTRUCTION STUDY AREA

INTRODUCTION

Location and Setting

Salix Consulting, Inc. (Salix) prepared an aquatic resources delineation for the ±60-acre Lincoln Regional Airport runway reconstruction study area located on the Lincoln Regional Airport property, between Airport Road and Flightline Drive, north of Nicolaus Road and south of West Wise Road, approximately 1 mile west of Highway 65 and 2 ½ miles from downtown Lincoln, Placer County, California. It is within Section 7, Township 12 North, Range 6 East on the Lincoln 7.5 minute USGS quadrangle (Figure 1). The approximate coordinates for the center of the study area are 38°54'33.79" N and 121°21'05.03" W.

The study area is located in the Sacramento Valley at approximately 115 feet in elevation. It is comprised of the paved runway (Runway 15-33) and adjacent areas. The study area is approximately 180-feet from each side of the runway centerline and 640-feet from the end of each runway. The study area is not an even rectangle (Figure 2).

Previous Delineation

In 2007, Jeff Glazner (as North Fork Associates) prepared a wetland delineation for the entire airport. A verification was requested by the Corps, but the Corps did not complete the verification. The 2007 mapping was used as a starting point for the current delineation. Regularly required maintenance around the runway has inadvertently modified the ground surface and wetland boundaries within the runway study area.

CONTACT INFORMATION

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City of Lincoln, California
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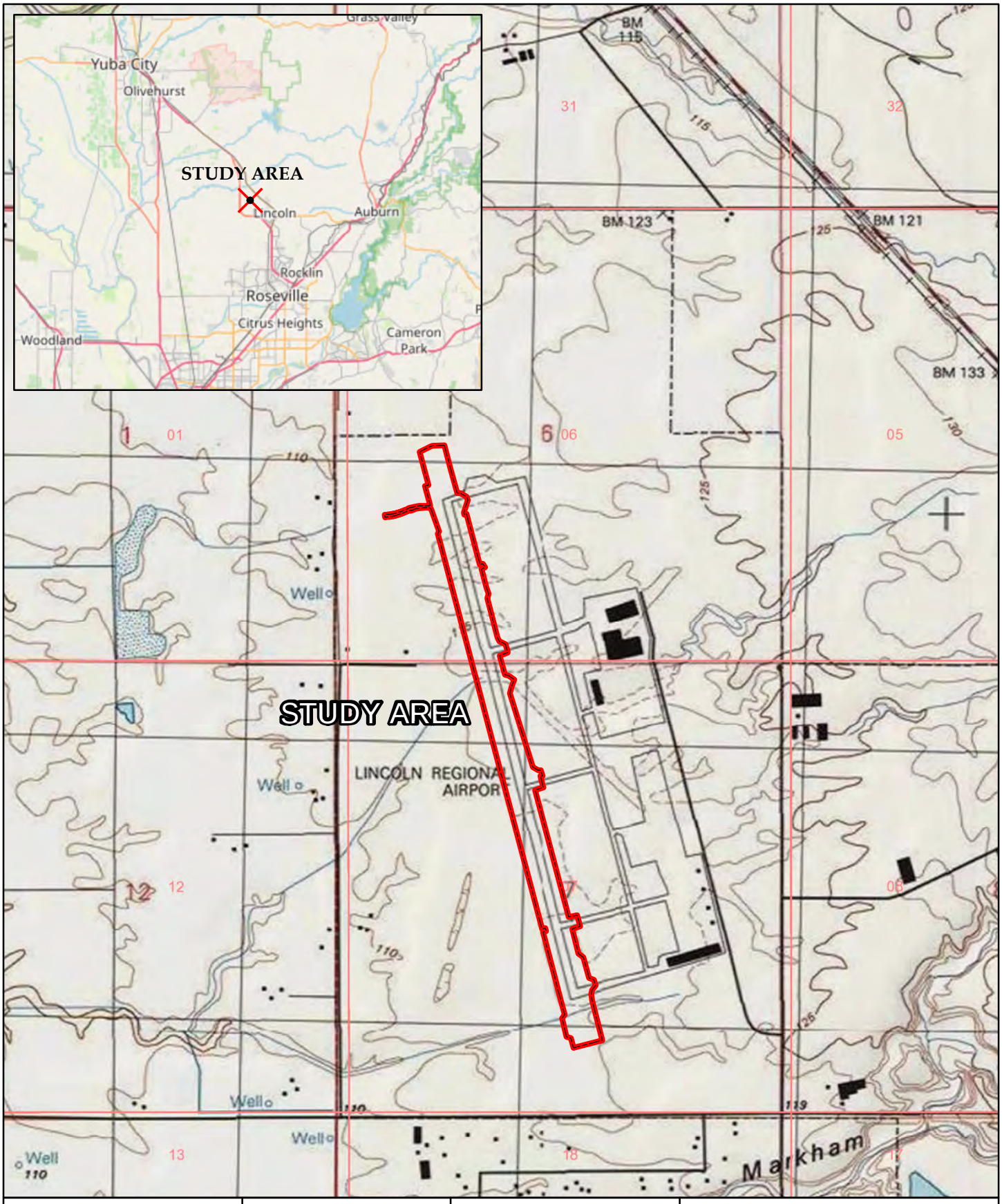
Contact: Roland Neufeld
Environmental Services Manager

Delineated by:
Salix Consulting, Inc.
11601 Blocker Drive, Suite 100
Auburn, California 95603
Phone: (530) 888-0130
Contact: Jeff Glazner



Salix consulting, inc.

N

0 1,000 2,000

Feet

Source Maps: USGS Topographic Map
Lincoln Quad 1:24,000
S6+7 T12N R6E

Figure 1

SITE AND VICINITY MAP

Lincoln Regional Airport

City of Lincoln, Placer County, CA

Salix consulting, inc.

N

0 450 900

Feet

Study Area
(±61.07 acres)

Figure 2

AERIAL MAP

Lincoln Regional Airport

City of Lincoln, Placer County, CA

METHODOLOGY

Aquatic resources were delineated on February 11, 2021, by Jeff Glazner and Hunter Gallant, and on March 26, 2021, by Jeff Glazner. The delineation was conducted according to the 1987 Corps Manual (Environmental Laboratory 1987) as amended by the Arid West Regional Supplement (U.S. Army Corps of Engineers 2008). Potential aquatic resources were evaluated and mapped using a Trimble GeoXT 6000 GPS (submeter). Three parameter data sheets (Appendix A) were filled out at six (6) locations as indicated on the Aquatic Resources Delineation Map. Biological communities of the study area were mapped, and representative photographs were taken.

Information on soils of the study area was obtained from the U.S. Department of Agriculture – National Resource Conservation Service's online Web Soil Survey (NRCS 2021). In the field, a Munsell Color chart was used to determine moist soil colors. Appendix B is a list of plants observed during the delineation, along with the scientific name and wetland status of each species. Where a plant species observed has a wetland indicator status (not UPL), plant nomenclature follows the National Wetland Plant List, version 3.4 (USACE 2018). Otherwise, species names are according to the *The Jepson Flora Project (Jepson eflora).*

Field data collected with the GPS were differentially corrected and were used to create an Aquatic Resources Delineation Map using ArcGIS software. The Corps of Engineers Aquatic Resources spreadsheet is included in Appendix C.

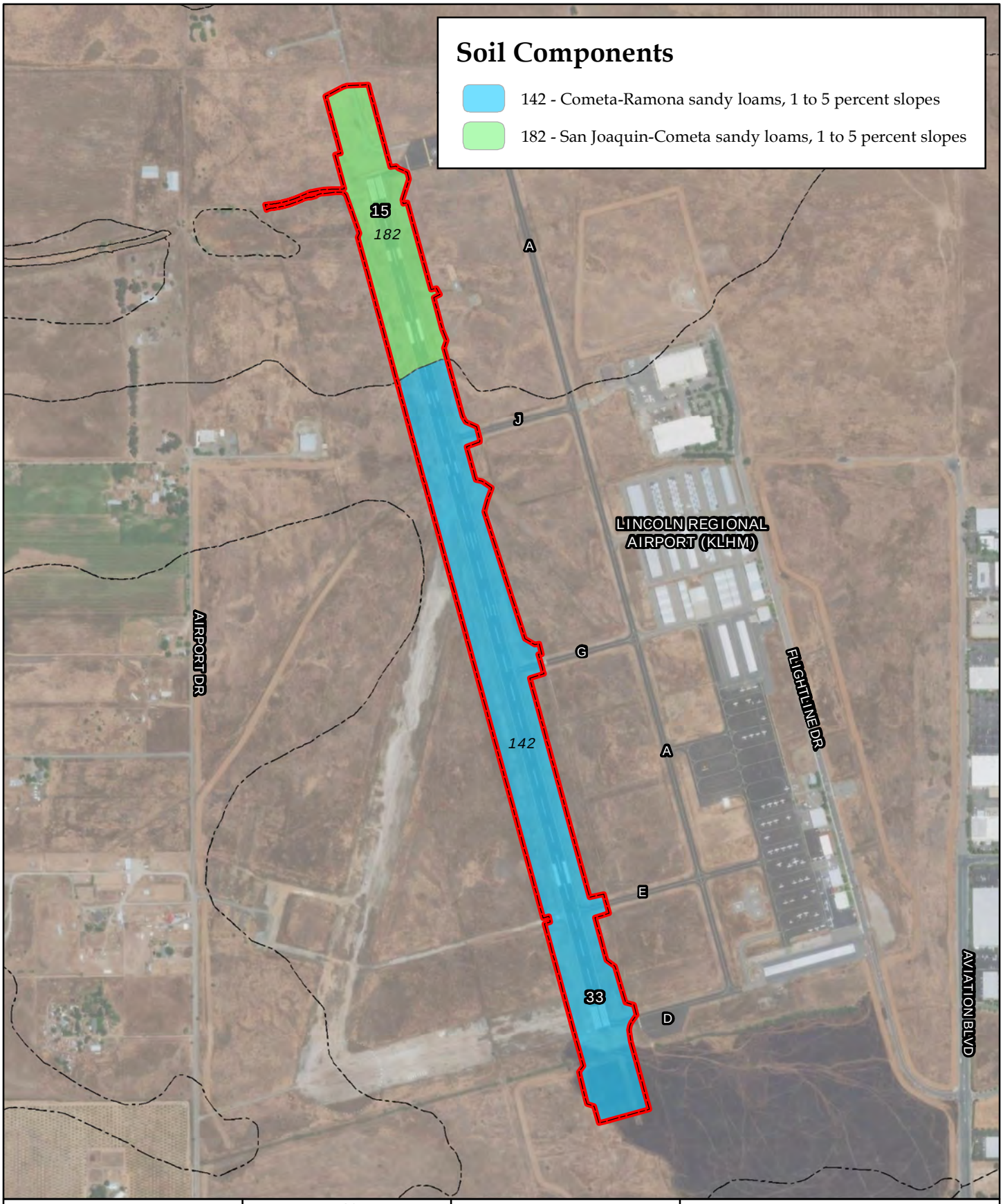
FINDINGS

Climate

Lincoln has a Mediterranean climate with cool, wet winters and hot, dry summers. Lincoln averages about 250 sunny days per year. During summer, days can become quite hot with an average high of 94°F in July. Some days have even hit 104°F, and these conditions have been known to last several weeks. The cooling effect of the delta breeze from the San Francisco Bay Area helps bring night temperatures down to comfortable levels. Spring and fall months are quite short transitional periods with mild temperatures. The "wet season" is generally October through April. During winter months, temperatures are quite chilly with an average low of 39°F in January. Although uncommon, some nights have reported below freezing temperatures. Lincoln receives an average of a little over 20.45 inches of precipitation a year. Snowfall is extremely rare in Lincoln, but it does occur from time to time.

Soils

Two soil units have been mapped within the study area: Cometa-Ramona sandy loams, 1 to 5 % slopes and San Joaquin-Cometa sandy loams, 1 to 5% slopes, as illustrated in Figure 3. Most of the soils mapped in the region of the study area are Alfisols, soils with a dense clay layer, or, like San Joaquin soils, have a duripan that restricts the percolation of water. As such, these soils tend to become inundated in swales and depressions



Salix consulting, inc.

N

0 450 900

Feet

Study Area (±61.07 acres)

Figure 3

SOILS MAP

Lincoln Regional Airport

City of Lincoln, Placer County, CA

during the rainy season. Several of these soils are known to support vernal pools in this part of the Central Valley. The components of each complex are described below.

Cometa-Ramona sandy loams, 1 to 5 % slopes

The **Cometa component** makes up 50 percent of this map unit. Slopes are 1 to 5 percent. This component is on terraces. Cometa soils are Alfisols formed from granitic rocks. Depth to a root restrictive layer, abrupt textural change, inches. The natural drainage class is well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3e. Irrigated land capability classification is 3e. This soil does not meet hydric criteria.

The **Ramona component** makes up 30 percent of this map unit. Slopes are 1 to 5 percent. This component is on terraces. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 3e. Irrigated land capability classification is 3e. This soil does not meet hydric criteria.

San Joaquin-Cometa sandy loams, 1 to 5% slopes

San Joaquin soils are Alfisols derived mostly from granitic rocks. These soils have clay later that starts about six inches from the surface and a duripan between 20 and 40 inches. The San Joaquin component makes up 40 percent of this map unit. Slopes are 1 to 5 percent. This component is on terraces. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer, duripan, is 35 to 50 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is high. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R017XD093CA Claypan ecological site. Nonirrigated land capability classification is 4e. Irrigated land capability classification is 4e. This soil does not meet hydric criteria.

The Cometa component makes up 30 percent of this map unit. Slopes are 1 to 5 percent. This component is on terraces. The parent material consists of alluvium derived from granite. Depth to a root restrictive layer, abrupt textural change, inches. The natural drainage class is well drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R017XD093CA Claypan ecological site.

Nonirrigated land capability classification is 4e. Irrigated land capability classification is 4e. This soil does not meet hydric criteria.

Hydrology

The study area is within two HUC12 watershed units, Ping Slough-Coon Creek (180201610204) to the north and Markham Ravine (180201610301) to the south. Both are part of the greater Upper Coon-Upper Auburn HUC8 (18020161) watershed.

The runway surface is crowned, and surface water sheds easterly or westerly toward "toe drains" at the base of the crown. These drains are not all graded to drain and have formed depressional areas, some of which support wetlands. Most of the wetlands within the study area occur along these toe drains. Generally, water trends northerly in the northern portion of the study area to a small ditch and then westerly. Water in the southern portion of the study area flows north to the main ditch transecting the airport or south towards the ditch at end of runway. Both ditches flow westerly in the southern portion of the study area and converge just offsite. From the point of convergence this unnamed stream flows approximately 1 mile before entering Markham Ravine. The ditch to the north flows westerly through a series of agricultural canals and into an unnamed tributary of Coon Creek 3 miles away. Both Coon Creek and Markham Ravine eventually drain into the Cross Canal that eventually drains into the Sacramento River.

Vegetation

Two landcover types are identified within the study area – annual grassland and pavement. Aquatic resources are embedded within the annual grassland and are discussed below under "Aquatic Resources."

Annual grassland

All areas adjacent to the runway are managed for aviation safety. They are mowed several times a year and kept sculpted to maintain a relatively smooth surface. Vegetation growing in this area is entirely herbaceous and comprised mostly of weedy annual species. Our field study was conducted during the early growing season for these species; thus, diversity was low, and many species had not yet germinated or were not yet identifiable. Common species observed included wild oat (*Avena fatua),* Italian ryegrass *(Festuca perennis),* soft chess *(Bromus hordeaceus),* Bermudagrass *(Cynodon dactylon), m*edusahead *(Elymus caput-medusae), b*road-leaf filaree *(Erodium botrys),* dove's-foot geranium *(Geranium molle),* long-beaked hawkbit *(Leontodon saxatilis),* wild radish (*Raphanus sativus),* sheep sorrel *(Rumex acetosella),* and rose clover (*Trifolium hirtum).* Typical views of the annual grassland habitat are presented in the site photos, Figures 4a-4e.

Depressional wetlands are embedded within the annual grassland and these features are discussed in the *Aquatic Resources* section below.

Paved

The remaining portion of the study area includes the existing runway (15-33) and associated taxiways connected to the runway, mostly from the east. No vegetation occurs within the paved area or immediately adjacent to most of the hard surfaces.

Aquatic Resources

Two categories of aquatic resources are mapped in the study area: vernal pool and ditch, as summarized in Table 1. These features are illustrated in the site photos in Figures 4a-4e and in Figure 5, the Delineation of Aquatic Resources map.

Table 1.
Aquatic Resources within the Lincoln Regional Airport Study Area

Type	Acreage
Aquatic Resources	
Vernal Pools	0.923
Ditch	0.015
Total	**0.938**

Vernal Pools

A total of 21vernal pools were mapped on both sides and at the south end of the runway. Because they are regularly managed, these features are generally similar, ranging in depth from approximately three to eight inches and supporting a mix of vernal pool and seasonal wetland species. These include stalked popcorn-flower (*Plagiobothrys stipitatus*), coyote thistle (*Eryngium vaseyi*), vernal pool buttercup (*Ranunculus bonariensis*), Italian ryegrass *(Festuca perennis),* long-beaked hawkbit *(Leontodon saxatilis),* Mediterranean barley *(Hordeum marinum),* broad-leaf filaree *(Erodium botrys),* hyssop loosestrife *(Lythrum hyssopifolia).*

The entire non-paved study area is regularly maintained by mowing or disking. The wetlands are likely perched over a shallow hardpan, which is prevalent throughout the Lincoln area and known from the mapped soil units. Many of these depressions are linear and are in a toe drain or along a drainage swale. The linear wetlands are not considered wetland swales here because they are situated in localized depressions within the low-lying areas where runoff and precipitation collect. They are considered vernal pools because they support a substantial vernal pool species component and have vernal pool hydrology. Refer to Figures 4a-4c and Figure 4e for photos of vernal pools in the study area.

Ditch

Two ditches are mapped in the study area. These features move water under the runway from east to west. They are framed by concrete headwalls and are relatively deep trapezoidal channels (Figure 4d). Ditch function is described above in *Hydrology*.

Vernal pool 1. *Photo date 2-4-21*

Vernal pool 2. *Photo date 3-26-21*

Salix consulting, inc.

Figure 4a

SITE PHOTOS

Lincoln Regional Airport

City of Lincoln, Placer County, CA

Vernal pool 13. *Photo date 3-26-21*

Vernal pool 8. *Photo date 3-26-21*

Salix consulting, inc.

Figure 4b

SITE PHOTOS

Lincoln Regional Airport

City of Lincoln, Placer County, CA

Vernal pool 12. *Photo date 3-26-21*

Vernal pool 16. *Photo date 3-26-21*

Salix consulting, inc.

Figure 4c

SITE PHOTOS

Lincoln Regional Airport

City of Lincoln, Placer County, CA

Ditch 1. *Photo date 3-26-21*

Ditch 2. *Photo date 3-26-21*

Salix consulting, inc.

Figure 4d

SITE PHOTOS

Lincoln Regional Airport

City of Lincoln, Placer County, CA

Vernal pool 18. *Photo date 3-26-21*

Vernal pool 19. *Photo date 3-26-21*

Salix consulting, inc.

Figure 4e

SITE PHOTOS

Lincoln Regional Airport

City of Lincoln, Placer County, CA

Aquatic Resources

Wetland Type		Acreage
Ditch		
D-1		0.015
D-2		0.002
	Subtotal	**0.015**
Seasonal Wetland		
VP-1		0.091
VP-2		0.137
VP-3		0.017
VP-4		0.027
VP-5		0.017
VP-6		0.020
VP-7		0.016
VP-8		0.003
VP-9		0.023
VP-10		0.011
VP-11		0.010
VP-12		0.017
VP-13		0.017
VP-14		0.011
VP-15		0.116
VP-16		0.006
VP-17		0.015
VP-18		0.303
VP-19		0.007
VP-20		0.009
VP-21		0.049
	Subtotal	**0.923**

Total 0.938 Acres

Prepared By:
Salix consulting, inc.

Prepared For:
City of Lincoln

DELINEATED BY: J. Glazner and H. Gallant, Feb-March 2021
DRAWN BY: H. Gallant
COORDINATE SYSTEM: NAD83 CA State Plane II (0402)
IMAGERY: Google, Feb. 2018

N
0 100 200
Feet

- Study Area (±61.07 acres)
- Upland Data Point
- Wetland Data Point
- Ditch
- Offsite Seasonal Wetlands
- Vernal Pool

Figure 5

DELINEATION OF AQUATIC RESOURCES

Lincoln Regional Airport

City of Lincoln, Placer County, CA

July 12, 2021

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Appendix A.
Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lincoln Airport City/County: Lincoln/Placer Sampling Date: 02-03-21

Applicant/Owner: City of Lincoln State: CA Sampling Point: 01

Investigator(s): Jeff Glazner, Hunter Gallant Section, Township, Range: S7, T12N, R6E

Landform (hillslope, terrace, etc.): terrace - flat Local relief (concave, convex, none): concave Slope (%): 0-1

Subregion (LRR): LRRC Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

Shallow depression in disked fieldin runway safety area, recently burned, but seedling vegetation is markedly different than surrounding areas. Evidence of prolonged saturation.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Plagiobothrys stipitatus	40	X	FACW
2. Rumex crispus	20	X	FAC
3. Leontodon saxatilis	5		FACU
4. Unknown forbs	15		FAC
5.			
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Burned last year, unknown forb seedlings too small for definitive identification. Appear to be wetland species.

SOIL

Sampling Point: 01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	7.5YR 4/2	90	5YR 4/6	10	C	M	clayey lo	disked annually

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): >14"

Hydric Soil Present? Yes ✓ No ___

Remarks:

Disked last year, soil homogenized, restrictive layer greater than 14". Shallow depression.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ✓ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ___ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 10

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Shallow depression in disked field. Vegetation markedly different than surrounding areas. Saturation in bottom of soil pit. Depression appears to saturate under normal condition.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lincoln Airport City/County: Lincoln/Placer Sampling Date: 02-03-21

Applicant/Owner: City of Lincoln State: CA Sampling Point: 02

Investigator(s): Jeff Glazner, Hunter Gallant Section, Township, Range: S7, T12N, R6E

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): LRRC Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No	**Is the Sampled Area within a Wetland?** Yes No ✓
Hydric Soil Present?	Yes No ✓	
Wetland Hydrology Present?	Yes No ✓	

Remarks:

Upland comparison to data point 01. On side slope of depression.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1. Rumex crispus	20	X	FAC
2. Erodium botrys	1		FACU
3. Festuca perennis	20	X	FAC
4.			
5.			
6.			
7.			
8.			
	41 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks:

Recently burned, disked. Vegetation is sparse.

SOIL

Sampling Point: 02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5YR 4/3	95	5YR 4/6	5			loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Disked soil. More loamy than in adjacent depression (less clay).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

On sideslope of basin and above pool elevation.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lincoln Airport City/County: Lincoln/Placer Sampling Date: 02-03-21

Applicant/Owner: City of Lincoln State: CA Sampling Point: 03

Investigator(s): Jeff Glazner, Hunter Gallant Section, Township, Range: S7, T12N, R6E

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 3

Subregion (LRR): LRRC Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No	**Is the Sampled Area within a Wetland?** Yes ✓ No
Hydric Soil Present?	Yes ✓ No	
Wetland Hydrology Present?	Yes ✓ No	

Remarks:

Toe drain capturing runway runoff. Evidence of prolonged saturation.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1. Eryngium vaseyi	10		FACW
2. Ranunculus bonariensis var. trisepalus	35	X	OBL
3. Eleocharis macrostachya	35	X	OBL
4. Hordeum marinum subsp. gussoneanum	15		FAC
5. Festuca perennis	5		FAC
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks:

Locally dense patch of Eleocharis.

SOIL

Sampling Point: 03

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5YR 4/4	95	5YR 5/6	5	C	M	clayey lo	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ✓ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): >12

Hydric Soil Present? Yes ✓ No _____

Remarks:

Infer hydric soils because of disturbed soil column and vegetation present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Toe drain captures water from crowned runway and sides of runway. Evidence of prolonged saturation inferred from landform and vegetation.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lincoln Airport City/County: Lincoln/Placer Sampling Date: 02-03-21

Applicant/Owner: City of Lincoln State: CA Sampling Point: 04

Investigator(s): Jeff Glazner, Hunter Gallant Section, Township, Range: S7, T12N, R6E

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): LRRC Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No ✓	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ____	No ✓	

Remarks:

Upland comparison to data point 03.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: ____)			
1. Elymus caput-medusae	60	X	UPL
2. Holocarpha virgata subsp. virgata	40	x	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum ____ % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	100	x 5 =	500
Column Totals:	100 (A)		500 (B)

Prevalence Index = B/A = 5

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks:

Dense upland grassland species from 2020, seedlings of 2021.

SOIL

Sampling Point: 04

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	5YR 4/4	100					clayey lo	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Upland soil lacking redox.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Above toe drain and depressional area.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lincoln Airport City/County: Lincoln/Placer Sampling Date: 02-03-21

Applicant/Owner: City of Lincoln State: CA Sampling Point: 05

Investigator(s): Jeff Glazner, Hunter Gallant Section, Township, Range: S7, T12N, R6E

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope (%): 0

Subregion (LRR): LRRC Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓ No _____	
Wetland Hydrology Present?	Yes ✓ No _____	

Remarks:

Depression in shallow swale.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Centromadia fitchii	15		FACU
2. Festuca perennis	35	X	FAC
3. Erodium botrys	10		FACU
4. Limnanthes sp.	15		FACW
5.			
6.			
7.			
8.			
	75 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 25 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Weedy vegetation that can occur in hydric conditions.

SOIL

Sampling Point: 05

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	7.5YR 4/2	90	5YR 4/6	10	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Hardpan

Depth (inches): 8

Hydric Soil Present? Yes ✓ No ___

Remarks:

Redox prominent.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✓ No ___ Depth (inches): 2

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Standing water at this location.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lincoln Airport City/County: Lincoln/Placer Sampling Date: 02-03-21

Applicant/Owner: City of Lincoln State: CA Sampling Point: 06

Investigator(s): Jeff Glazner, Hunter Gallant Section, Township, Range: S7, T12N, R6E

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 2

Subregion (LRR): LRRC Lat: Long: Datum:

Soil Map Unit Name: NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No (If no, explain in Remarks.)

Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No

Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No ✓	**Is the Sampled Area within a Wetland?** Yes No ✓
Hydric Soil Present?	Yes	No ✓	
Wetland Hydrology Present?	Yes	No ✓	

Remarks:

Upland comparison to data point 05.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size:)			
1. Elymus caput-medusae	60	X	UPL
2. Festuca perennis	30	X	FAC
3. Epilobium brachycarpum	5		UPL
4. Acmispon americanus	5		UPL
5. Bromus hordeaceus	5		FACU
6.			
7.			
8.			
	105 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	30	x 3 =	90
FACU species	5	x 4 =	20
UPL species	70	x 5 =	350
Column Totals:	105 (A)		460 (B)

Prevalence Index = B/A = 4.4

Hydrophytic Vegetation Indicators:

__ Dominance Test is >50%

__ Prevalence Index is ≤3.0[1]

__ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No ✓

Remarks:

Dense upland grassland vegetation.

SOIL

Sampling Point: 06

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5YR 4/4	100					loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Loam

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Upland landscape position adjacent to data point 05 and wetland.

Appendix B.
Plant Species Observed on the Lincoln Airport Study Area

Appendix B-Plants Observed Lincoln Airport Runway - Feb & Mar 2021

Taxon	Common Name	Wetland Status
Acmispon americanus	Spanish lotus	UPL
Aira caryophyllea	Silver European hairgrass	FACU
Avena barbata	Slender wild oat	UPL
Bromus diandrus	Ripgut grass	UPL
Bromus hordeaceus	Soft chess	FACU
Calandrinia menziesii	Red maids	FACU
Cardamine oligosperma	Western bitter-cress	FAC
Centaurea solstitialis	Yellow starthistle	UPL
Centromadia fitchii	Fitch's spikeweed	FACU
Cicendia quadragnularis	Oregon timwort	FAC
Cichorium intybus	Chicory	FACU
Convolvulus arvensis	Bindweed	UPL
Croton setiger	Turkey mullein	UPL
Cynodon dactylon	Bermudagrass	FACU
Dittrichia graveolens	Stinkwort	UPL
Eleocharis macrostachya	Creeping spikerush	OBL
Elymus caput-medusae	Medusahead	UPL
Epilobium brachycarpum	Summer cottonweed	UPL
Erodium botrys	Broad-leaf filaree	FACU
Erodium cicutarium	Red-stem filaree	UPL
Eryngium vaseyi	Coyote thistle	FACW
Festuca myuros	Rattail sixweeks grass	FACU
Festuca perennis	Italian ryegrass	FAC
Geranium molle	Dove's-foot geranium	UPL
Holocarpha virgata subsp. virgata	Virgate tarweed	UPL
Hordeum marinum subsp. gussoneanum	Mediterranean barley	FAC
Hypochaeris glabra	Smooth cat's-ear	UPL
Juncus balticus	Baltic rush	FACW
Juncus bufonius	Toad rush	FACW
Lactuca serriola	Prickly lettuce	FACU
Lasthenia fremontii	Fremont's goldfield	OBL
Leontodon saxatilis	Long-beaked hawkbit	FACU
Lepidium nitidum	Shining peppergrass	FAC
Limnanthes sp.	Meadowfoam	VARIES
Lythrum hyssopifolia	Hyssop loosestrife	OBL
Medicago polymorpha	California burclover	FACU
Navarretia intertexta	Needle-leaved navarretia	FACW
Plagiobothrys stipitatus	Stalked popcorn-flower	FACW

Taxon	Common Name	Wetland Status
Pogogyne zizphoroides	Sacramento mesamint	OBL
Psilocarphus brevissimus	Short woollyheads	FACW
Ranunculus bonariensis var. trisepalus	Vernal pool buttercup	OBL
Raphanus sativus	Wild radish	UPL
Rumex acetosella	Sheep sorrel	FACU
Rumex crispus	Curly dock	FAC
Stellaria media	Common chickweed	FACU
Trifolium dubium	Little hop clover	UPL
Trifolium hirtum	Rose clover	UPL
Trifolium variegatum	Whitetip clover	FAC
Triphysaria eriantha	Butter-and-eggs	UPL
Vicia villosa	Winter vetch	UPL

Appendix C.
USACOE Aquatic Resources Spreadsheet

APPENDIX C

Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude	Local_Waterway
D-1	CALIFORNIA	R4	RIVERINE	Area	0.01484666	ACRE	ISOLATE	38.91143429	-121.35274932	Markham Ravine
D-2	CALIFORNIA	R4	RIVERINE	Area	0.00183036	ACRE	ISOLATE	38.91641252	-121.35445440	Markham Ravine
VP-1	CALIFORNIA	PEM	DEPRESS	Area	0.09059999	ACRE	ISOLATE	38.89996395	-121.34879246	Markham Ravine
VP-2	CALIFORNIA	PEM	DEPRESS	Area	0.13734842	ACRE	ISOLATE	38.90831520	-121.35031965	Markham Ravine
VP-3	CALIFORNIA	PEM	DEPRESS	Area	0.01731352	ACRE	ISOLATE	38.90889701	-121.35072224	Markham Ravine
VP-4	CALIFORNIA	PEM	DEPRESS	Area	0.0269536	ACRE	ISOLATE	38.90950495	-121.35092809	Markham Ravine
VP-5	CALIFORNIA	PEM	DEPRESS	Area	0.01658209	ACRE	ISOLATE	38.90981072	-121.35104073	Markham Ravine
VP-6	CALIFORNIA	PEM	DEPRESS	Area	0.02029472	ACRE	ISOLATE	38.91020282	-121.35128333	Markham Ravine
VP-7	CALIFORNIA	PEM	DEPRESS	Area	0.01604339	ACRE	ISOLATE	38.91391141	-121.35233085	Markham Ravine
VP-8	CALIFORNIA	PEM	DEPRESS	Area	0.00346934	ACRE	ISOLATE	38.91438930	-121.35247521	Markham Ravine
VP-9	CALIFORNIA	PEM	DEPRESS	Area	0.02333783	ACRE	ISOLATE	38.91496604	-121.35267919	Markham Ravine
VP-10	CALIFORNIA	PEM	DEPRESS	Area	0.01050442	ACRE	ISOLATE	38.91566646	-121.35290140	Markham Ravine
VP-11	CALIFORNIA	PEM	DEPRESS	Area	0.01044898	ACRE	ISOLATE	38.91599188	-121.35300631	Markham Ravine
VP-12	CALIFORNIA	PEM	DEPRESS	Area	0.01679501	ACRE	ISOLATE	38.91546786	-121.35406673	Markham Ravine
VP-13	CALIFORNIA	PEM	DEPRESS	Area	0.0174697	ACRE	ISOLATE	38.91479715	-121.35384368	Markham Ravine
VP-14	CALIFORNIA	PEM	DEPRESS	Area	0.01071537	ACRE	ISOLATE	38.91313971	-121.35328436	Markham Ravine
VP-15	CALIFORNIA	PEM	DEPRESS	Area	0.11626547	ACRE	ISOLATE	38.91244469	-121.35303441	Markham Ravine
VP-16	CALIFORNIA	PEM	DEPRESS	Area	0.00625453	ACRE	ISOLATE	38.91175992	-121.35281012	Markham Ravine
VP-17	CALIFORNIA	PEM	DEPRESS	Area	0.01471345	ACRE	ISOLATE	38.90725329	-121.35141459	Markham Ravine
VP-18	CALIFORNIA	PEM	DEPRESS	Area	0.30294638	ACRE	ISOLATE	38.90522485	-121.35075142	Markham Ravine
VP-19	CALIFORNIA	PEM	DEPRESS	Area	0.00713559	ACRE	ISOLATE	38.90263670	-121.34986016	Markham Ravine
VP-20	CALIFORNIA	PEM	DEPRESS	Area	0.00942543	ACRE	ISOLATE	38.91282828	-121.35195801	Markham Ravine
VP-21	CALIFORNIA	PEM	DEPRESS	Area	0.04865575	ACRE	ISOLATE	38.91604838	-121.35445171	Markham Ravine

MADRONE ECOLOGICAL CONSULTING

Memo

To: Jim Wallace/Wallace Environmental Consulting

From: Sarah VonderOhe/Senior Biologist SMV

Date: 24 February 2022

Subject: Lincoln Regional Airport Runway Reconstruction – Likelihood of Federally Listed Vernal Pool Large Branchiopod Presence

Jim:

Our sampling efforts for federally listed vernal pool large branchiopods started on 4 November 2021 and we have surveyed every two weeks since that time until all the aquatic resources being sampled were dry on 17 February 2022.

The only vernal pool large branchiopod species located on site was California fairy shrimp (*Linderiella occidentalis*), which is neither federally nor state listed, but it occurs in similar habitat and during a similar time of year as regionally occurring federally listed vernal pool large branchiopods such as vernal pool fairy shrimp (*Branchinecta lynchi*). We found *L. occidentalis* at the project site on 6 January2022, 20 January 2022 and 3 February 2022.

During this same timeframe we have located federally listed vernal pool large branchiopods on sites in Placer County, Tehama County, Merced County, Sacramento County, and Shasta County.

It is possible that a cold, rainy March in Placer County could result in the re-inundation of the aquatic resources we have been sampling; however, in my professional opinion, the results are unlikely to differ from the results to date. The greater than six-week period when we found *L. occidentalis* on the site demonstrates an extended period of appropriate temperature and hydrology for hatching. Additionally, we documented positive survey results for federally listed vernal pool large branchiopods in five counties throughout northern California, including the county where the Lincoln Regional Airport Runway Reconstruction project is located.

Please feel free to contact me at svonderohe@madroneeco.com or (916) 822-3225 if you need an additional information.

APPENDIX C
CULTURAL RESOURCES INVENTORY

Federal and State laws protect cultural resources in part by keeping the location of resources confidential and unavailable to the general public. Reports are available to qualified reviewers at the offices of the Lincoln Planning Division, 600 6th Street, Lincoln, CA 95648